

**Wildlife Damage Management (WDM) Program
Customer Service Survey: 2021 Report (HDWI – WDM2021)**

Faren R. Wolter, Ph.D., CWB®
Human Dimensions Specialist
South Dakota Department of Game, Fish, and Parks



Department of Game, Fish, and Parks

Foss Building
523 East Capitol Avenue
Pierre, South Dakota 57501-3182

Wolter, F. R. 2022. Wildlife Damage Management (WDM) Program Customer Service: 2021 Survey Report. Report ID# HDWI-WDM2021. Pierre, SD: South Dakota Game, Fish, and Parks.

With more than 85% percent of South Dakota held in private ownership, partnerships with landowners, farmers, and producers are critical to South Dakota Game, Fish, and Parks (GFP) overall mission. Private lands in South Dakota provide important wildlife habitat for both game and non-game species, in addition to public access to these trust resources, which many South Dakotans and visitors enjoy every year. It is because of these important considerations that GFP operates an active, cooperative, and comprehensive Wildlife Damage Management (WDM) Program. In 2019, the South Dakota Governor's Office selected the Wildlife Management Institute to conduct an independent, 10-year historical review of GFP's WDM Program. As a result of this review and staff discussions, GFP developed a strategic plan specific to the issues of wildlife damage management in South Dakota. In 2021, the WDM Program strategic plan was presented to and adopted by GFP's Commission. Within this plan, *Goal #1: Provide excellent customer service and program transparency* ensures internal and external program accountability. One action item identified by GFP staff was the need to regularly assess landowner, farmer, and producer program needs to better understand economic losses associated with wildlife-caused damage, including in which GFP region the damage occurred, and overall satisfaction with GFP's effectiveness in resolving wildlife-associated damage events. In 2022, GFP implemented the *Wildlife Damage Management (WDM) Program Customer Service Survey*. The purpose of this survey is to regularly assess overall customer service satisfaction, as well as to quantify and qualify WDM services and needs in South Dakota. This report summarizes 2021 survey findings. The sampling frame consists of all 2021 WDM customers for whom GFP has an email and mailing address (i.e., not randomly selected). To minimize cost, this survey was administered using a single mode (i.e., Qualtrics online survey platform). To announce the survey and to clarify the Qualtrics' email used to distribute the online link, a postcard was mailed to all in the sample. Three reminder emails were sent, each one week apart. Adjusting for undeliverable, opt-out, and ineligible surveys, sample size was 1,058 customers with a 29% (n=301) response rate.

DISCLAIMER

The views expressed in survey comments are the views of the commenting respondent(s) and do not necessarily reflect the views or policies of the South Dakota Department of Game, Fish, and Parks or the author(s) of this report. Neither the South Dakota Department of Game, Fish, and Parks nor the author(s) guarantee the accuracy, completeness, or reliability of any opinion or view expressed in respondents' comments. The South Dakota Department of Game, Fish, and Parks reserves the right, but not obligation, to remove at its discretion any language which discloses personally identifiable information about respondents or any other individual, as well as language which is obscene, profane, offensive, malicious, discriminatory, defamatory or otherwise unlawful.

Executive Summary

With more than 85% percent of South Dakota held in private ownership, partnerships with landowners, farmers, and producers are critical to South Dakota Game, Fish, and Parks (GFP) overall mission. Private lands in South Dakota provide important wildlife habitat for both game and non-game species, in addition to public access to these trust resources, which many South Dakotans and visitors enjoy every year. It is because of these important considerations that GFP operates an active, cooperative, and comprehensive Wildlife Damage Management (WDM) Program. In 2019, the South Dakota Governor's Office selected the Wildlife Management Institute to conduct an independent, 10-year historical review of GFP's WDM Program. As a result of this review and staff discussions, GFP developed a strategic plan specific to the issues of wildlife damage management in South Dakota. In 2021, the WDM Program strategic plan was presented to and adopted by GFP's Commission.

Within this plan, *Goal #1: Provide excellent customer service and program transparency* ensures internal and external program accountability. One action item identified by GFP staff was to develop a cost-effective and meaningful way to determine customer satisfaction and program successes. Accordingly, in 2022 GFP implemented the *Wildlife Damage Management (WDM) Program Customer Service Survey*. The purpose of this survey is to regularly assess overall customer service satisfaction, as well as to quantify and qualify wildlife damage management services and needs in South Dakota. In addition to customer service-related questions, survey participants were asked about five aspects related to their wildlife-associated damage during 2021.

1. where the wildlife damage occurred
2. frequency of the wildlife damage
3. estimated economic impact from the wildlife damage
4. types of WDM Program services received and level of satisfaction or dissatisfaction with each
5. overall effectiveness of GFP's WDM Program in addressing the wildlife damage

To minimize costs this survey was only administered online. The sampling frame (i.e., who received a survey invite) was limited because not every customer provides an email address. Accordingly, we used a convenience sampling approach, which means data cannot be generalized to the larger population of all WDM customers who received wildlife damage services in 2021. Because convenience sampling is a non-probability method, which is typically less expensive to conduct, data often have an extremely high level of bias. Despite the disadvantages of convenience sampling, findings can be helpful in obtaining a range of attitudes and opinions of customers who participated in the survey and should not be entirely discounted. Instead, findings should be cautiously interpreted and applied to program decision-making.

This executive summary shares all major findings and data are summarized by the following sections: survey sample, customer service, land ownership, and wildlife damage assessments for seven wildlife species that comprise the bulk of WDM Program service requests (e.g., beaver, coyote, elk, deer, goose, prairie dog, turkey). Respondents were also given the opportunity to tell GFP if they received services for 'other wildlife'. This report does not discuss findings nor does it make WDM Program management recommendations.

Survey Sample

- To minimize costs this survey was only administered online. The sampling frame (i.e., who received a survey invite) was limited because not every customer provides an email address. Accordingly, we used a convenience sampling approach, which means data cannot be generalized to the larger population of all WDM customers who received wildlife damage services in 2021.
- Customer survey response rate was 29% (n=301). Approximately 86% were completed online via email invite and 14% by mailed postcard that included two options: an email link or a QR code.

Customer Service

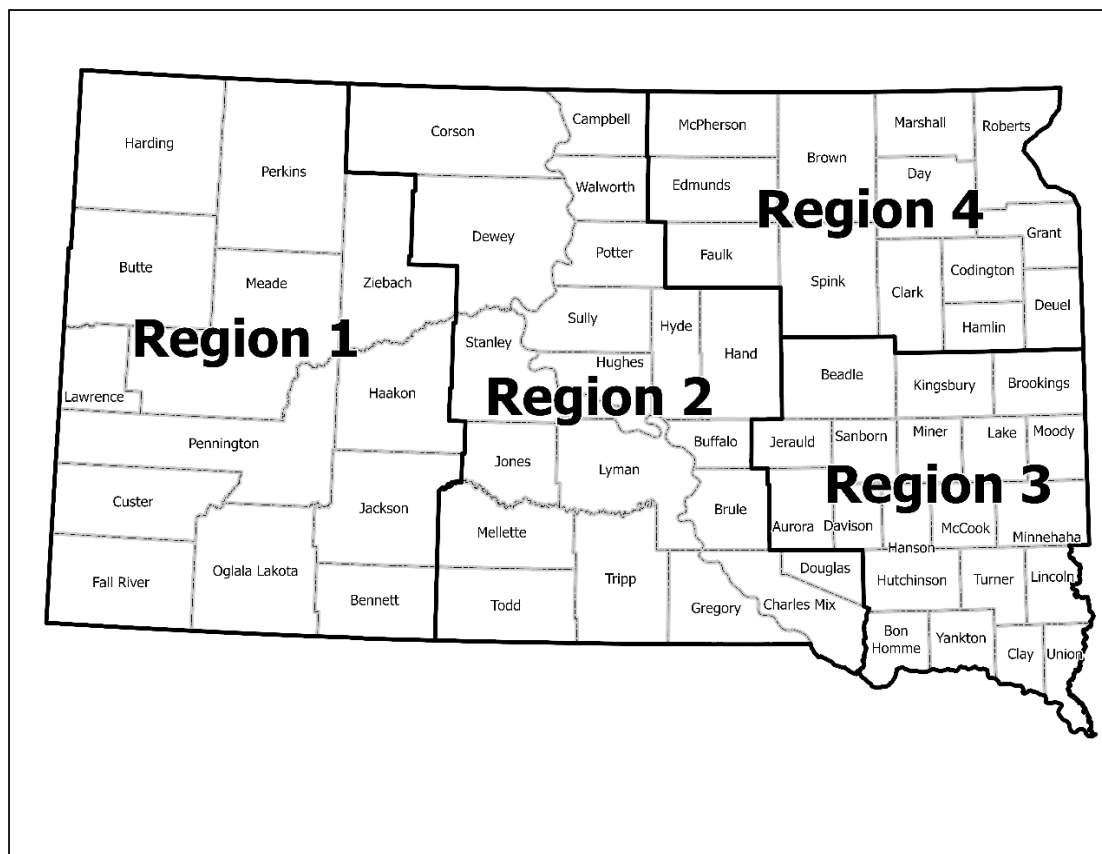
- 80% (n=280) of customers reported not having difficulty finding information about how to contact GFP regarding their wildlife-associated damage.
- The majority of customers initially contacted a GFP Conservation Officer (44% [n=128]) or a GFP Wildlife Damage Specialist (42% [n=121]) about their wildlife-associated damage.
- Of the customers who completed the survey, the majority rated GFP employees as excellent or good in five areas of customer service (Figs. 3-7, pp, 6-8).
 - Person was knowledgeable: 63% (n=187) excellent and 33% (n=98) good
 - Person was professional: 67% (n=200) excellent and 30% (n=89) good
 - Person was responsive to my need or concern: 66% (n=198) excellent and 27% (n=81) good
 - Person was courteous: 68% (n=200) excellent and 29% (n=85) good
 - Person had a positive attitude: 67% (n=199) excellent and 31% (n=91) good

Land Ownership Type

- Of the customers who completed the survey, 50% (n=148) of land ownership was exclusively farming, followed by 14% (n=410) mostly farming with some ranching and 13% (n=38) equal farming and ranching.
- 5% (n=16) of customers who completed the survey selected ‘other landowner type’ and were asked to provide a text response describing their ownership type. Responses and landowner type descriptions varied:
 - mixes of homeowner, homestead, farmstead, farming, haying, pasture, and/or livestock
 - golf course
 - hobby farm or raise chicken and ducks
 - wildlife habitat
 - a little farming and wildlife habitat
 - aerial spray business

Wildlife-Caused Damage

- Customers were asked about which species they contacted GFP for services during 2021. Of those who completed the survey, seven wildlife species comprise the bulk of WDM service requests (e.g., beaver, coyote, elk, deer, goose, prairie dog, turkey), 76% (n=230) selected one species and 20% (n=60) selected two.
- 60% (n=180) of customers who participated in this survey contacted GFP about goose-caused damage, followed by 27% (n=80) coyote-caused damage, and 22% (n=67) beaver-caused damage. The following other wildlife species (n=11) were selected: badger, dickcissel, gull, hawk, mink, mountain lion, red fox, and wolf.
- The most often selected wildlife species by landowner type are:
 - Homeowner only: 82% (n=9) beaver
 - Exclusively farming: 74% (n=129) goose
 - Mostly farming, some ranching: 52% (n=28) goose
 - Equal farming and ranching: 47% (n=27) coyote
 - Mostly ranching, some farming: 55% (n=23) coyote
 - Exclusively ranching: 55% (n=13) coyote
 - Other: 39% (n=7) beaver, 22% (n=4) goose
- Customers used the below map to indicate where their wildlife-associated damage occurred. Data is presented in the following order: beaver, coyote, elk, deer, goose, prairie dog, turkey.



Beaver (pp. 13 – 14)

- 22% (n=67) of customers who participated in this survey contacted GFP about beaver-caused damage during 2021.
- Of customers who responded to a question about where their 2021 beaver-related service calls occurred, 49% (n=33) occurred in Region 4, 42% (n=28) in Region 3, and 4% (n=3) each in Regions 1 and 2.
- 42% (n=28) of customers who completed this survey reported their 2021 beaver-caused damage as a recurring problem for more than five years, followed by 25% (n=17) recurring problem over last two to four years and 11% (n=16) each between new damage in 2021 that is recurring or occurred one time.
- 48% (n=30) of customers who participated in this survey valued their 2021 beaver-caused economic impact as up to \$999 and 35% (n=22) as \$1,000 - \$4,999 dollars, while 15% (n=11) valued their economic impact as \$5,000 dollars or greater.
- Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), customers were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their beaver-caused damage. Customers most often reported (i.e., mode) being very satisfied (Table 3, p. 13)
- 68% (n=45) of customers who completed the survey rated the overall effectiveness of GFP's WDM Program in addressing their 2021 beaver-caused damage as very effective, followed by 26% (n=17) moderately effective, and 6% (n=4) not effective at all.

Coyote (pp. 15 – 16)

- 27% (n=80) of customers who participated in this survey contacted GFP about coyote-caused damage during 2021.
- Of customers who responded to a question about where their 2021 coyote-related service calls occurred, 38% (n=30) occurred in Region 4, 28% (n=22) in Region 3, 22% (n=17) in Region 1, and 13% (n=2) in Region 2.
- 57% (n=45) of customers who completed this survey reported their 2021 coyote-caused damage as a recurring problem for more than five years, followed by 25% (n=20) recurring problem over last two to four years, 11% (n=9) new damage in 2021 that is recurring, and 6% (n=5) new damage in 2021 that occurred one time.
- 44% (n=33) of customers who participated in this survey valued their 2021 coyote-caused economic impact as \$1,000 - \$4,999 dollars and 37% (n=28) as \$999 or less, while 13% (n=10) selected \$5,000 to \$9,999 dollars and 5% (n=4) valued their economic impact as \$10,000 dollars or greater.
- Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied,

3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their coyote-caused damage. Customers most often reported (i.e., mode) being very satisfied (Table 4, p. 16).

- 50% (n=39) of customers who completed the survey rated the overall effectiveness of GFP's WDM Program in addressing their 2021 coyote-caused damage as moderately effective, followed by 42% (n=32) very effective, and 8% (n=6) not effective at all.

Deer (pp. 17 – 18)

- 11% (n=32) of customers who participated in this survey contacted GFP about deer-caused damage during 2021.
- Of customers who responded to a question about where their 2021 deer-related service calls occurred, 48% (n=15) occurred in Region 4, 39% (n=12) in Region 3, 10% (n=3) in Region 1, and 3% (n=1) in Region 2.
- 61% (n=19) of customers who completed the survey reported their 2021 deer-caused damage as a recurring problem for more than five years, followed by 29% (n=9) recurring problem over last two to four years, 6% (n=2) new damage in 2021 that is recurring, and 4% (n=1) new damage in 2021 that occurred one time.
- 42% (n=13) of customers who responded to the survey valued their 2021 deer-caused economic impact as \$1,000 - \$4,999 dollars 26% (n=8) as \$10,000 dollars or greater, while 23% (n=7) selected \$999 dollars or less, and 9% (n=3) valued their economic impact as \$5,000 to \$9,999 dollars.
- Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their deer-caused damage. There was variation in levels of satisfaction across provided deer-caused damage services, but most customers (i.e., mode) rated their levels of satisfaction as somewhat satisfied or very satisfied (Table 5, p. 18).
- 47% (n=14) of customers rated the overall effectiveness of GFP's WDM Program in addressing their 2021 deer-caused damage as moderately effective, followed by 30% (n=9) not effective at all, and 23% (n=7) very effective.

Elk (pp. 19 – 20)

- 1% (n=4) of customers who participated in this survey contacted GFP about elk-caused damage during 2021.
- 75% (n=3) of 2021 elk-related service calls occurred in Region 1 and 25% (n=1) in Region 4.
- One customer reported their elk-caused damage as a recurring problem for more than five years, one reported as recurring problem over last two to four years, one selected new

damage in 2021 that is recurring, and one reported new damage in 2021 that occurred one time

- 75% (n=3) of customers who completed the survey valued their 2021 elk-caused economic impact as \$999 dollars or less and 25% (n=1) valued their economic impact as \$5,000 to \$9,999 dollars.
- Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their elk-caused damage. Customers reported (i.e., mode) being very satisfied with four of the elk-caused damage services provided and somewhat dissatisfied with one (Table 6, p. 20).
- 75% (n=3) of customers who participated in the survey rated the overall effectiveness of GFP's WDM Program in addressing their 2021 elk-caused damage as very effective and 25% as not effective at all.

Goose (pp. 21 – 22)

- 60% (n=180) of customers who participated in this survey contacted GFP about goose-caused damage during 2021.
- Of customers who responded to a question about where their 2021 goose-related service calls occurred, 55% (n=97) indicated in Region 4, 42% (n=74) in Region 3, and 3% (n=6) in Region 2.
- 65% (n=113) of customers who completed the survey reported their 2021 goose-caused damage as a recurring problem for more than five years, followed by 26% (n=46) a recurring problem over last two to four years and responses were evenly split (5% [n=8] each) between new damage in 2021 that is recurring or occurred one time.
- 46% (n=79) of customers who responded valued their 2021 goose-caused economic impact as \$1,000 - \$4,999 dollars, 23% (n=39) as \$5,000 - \$9,999 dollars, 19% (n=33) as \$999 dollars or less, and 12% (n=21) as \$10,000 dollars or greater.
- Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their goose-caused damage. There was variation in levels of satisfaction across provided goose-caused damage services, but most customers (i.e., mode) rated reported being very satisfied or somewhat satisfied (Table 7, p. 22).
- 59% (n=101) of customers who participated in the survey rated the overall effectiveness of GFP's WDM Program in addressing their 2021 goose-caused damage as moderately effective, followed by 27% (n=46), very effective and 14% (n=25) as not effective at all.

Prairie Dog (pg. 23)

- Two customers who participated in this survey contacted GFP about prairie dog-caused damage during 2021.
- Both prairie dog-related service calls occurred in Region 1 and reported their prairie dog-caused damage as a recurring problem for more than five years.
- One customer valued their prairie dog-caused economic impact as \$5,000 - \$9,999 dollars and the other customer as \$10,000 dollars or greater.
- Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their prairie dog-caused damage. Due to a very low sample size (n=2) levels of satisfaction widely vary (Table 8, p. 23).
- One customer rated the overall effectiveness of GFP's Wildlife Damage Management Program in addressing their prairie dog-caused damage as very effective, the other customer did not respond.

Turkey (pp. 24 – 25)

- 3% (n=8) of customers who participated in this survey contacted GFP about turkey-caused damage during 2021.
- Of customers who responded to a question about where their 2021 turkey-related service calls occurred, 57% (n=4) occurred in Region 4, 28% in Region 2 (n=2), and 14% (n=1) in Region 3.
- 43% (n=3) of customers who answered this question reported their turkey-caused damage as new damage in 2021 that is recurring, 29% (n=2) a recurring problem for more than five years, and responses of a recurring problem over last two to four years and new damage in 2021 that occurred one time were evenly split at 14% (n=1) each.
- 57% (n=4) of customers who responded to this question valued their 2021 turkey-caused economic impact as \$999 or less and 43% (n=3) as \$1,000 - \$4,999 dollars.
- Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their Turkey-caused damage. Due to a very low sample size customer levels of satisfaction widely vary across all turkey-caused damage services provided (Table 9, p. 25).
- 40% (n=2) of customers answering this question rated the overall effectiveness of GFP's WDM Program in addressing their 2021 turkey-caused damage as very effective and 60% (n=3) as not effective at all.

Other Wildlife (pp. 26 – 27)

- 4% (n=11) of customers who participated in this survey contacted GFP about other wildlife-caused damage during 2021.
- Due to very low sample sizes and uniqueness of each species, this data cannot be similarly analyzed as is in previous sections, and therefore, is briefly summarized below.

Badger (n=2)

- One customer reported their other wildlife-related service call occurred in Region 3, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$999 dollars or less. This respondent did not rate their level of satisfaction with types of services offered nor the overall effectiveness of addressing damage.

Dickcissel (n=1)

- Customer reported their other wildlife-related service call occurred in Region 3, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$1,000 to \$4,999 dollars. This respondent was neither dissatisfied nor satisfied with all types of services offered and rated the overall effectiveness of addressing damage was moderately effective.

Gull (n=1)

- Customer reported their other wildlife-related service call occurred in Region 3, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$5,000 to \$9,999 dollars. This respondent was very satisfied with technical information received and rated the overall effectiveness of addressing damage was very effective. The remaining types of services offered were not applicable.

Hawk (n=1)

- Customer reported their other wildlife-related service call occurred in Region 3, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$999 dollars or less. This respondent was very satisfied with technical information received, the WDS Specialist, and exclusion techniques applied. The remaining types of services offered were not applicable. The customer rated the overall effectiveness of addressing damage as moderately effective.

Mink (n=3)

- All customers reported their other wildlife-related service call occurred in Region 3 and valued their other wildlife-caused economic impact as \$999 dollars or less. One indicated this was new damage in 2021 that occurred one time, one reported new damage in 2021 that is recurring, and one responded that their damage was a recurring problem for 5 or more years. All were very satisfied with technical information received. Two reported being very satisfied (one not applicable) to the following services: loaner equipment, the WDS Specialist, altering habitat,

and exclusion techniques applied. Deterrence type of service was not applicable. Two customers rated the overall effectiveness of addressing damage as moderately effective and one reported very effective.

Mountain lion (n=1)

- Customer reported their other wildlife-related service call occurred in Region 4, was new damage in 2021 that occurred once and valued their other wildlife-caused economic impact as \$10,000 dollars or more. This customer reported that none of the wildlife-caused damage services were applicable and rated the overall effectiveness of addressing damage as not effective at all.

Red fox (n=1)

- Customer reported their other wildlife-related service call occurred in Region 4, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$999 dollars or less. This respondent was very satisfied with technical information received and the WDS Specialist. The remaining types of services offered were not applicable. The customer rated the overall effectiveness of addressing damage as very effective.

Wolf (n=1)

- Customer reported their other wildlife-related service call occurred in Region 4, was new damage in 2021 that occurred once and valued their other wildlife-caused economic impact as \$999 dollars or less. This respondent was very satisfied with technical information received and neither dissatisfied nor satisfied with loaner equipment. The remaining types of services offered were not applicable. The customer rated the overall effectiveness of addressing damage as very effective.

Closing Question Comments

Survey participants were offered the opportunity to tell GFP if there was anything else that s/he believed the survey overlooked and that they would like to convey related to the WDM Program in South Dakota. About 28% (n=98) customers provided additional text responses (pp. 27 – 33).

Table of Contents

Executive Summary	ii
List of Figures	xii
List of Tables	xiii
Introduction	1
Methods	1
Sampling Frame	1
Survey Administration	1
Statistical Analysis	1
Descriptive Data	2
Cross-Tabulation Tables	2
Psychometrics and Likert-Type Scale Measurement	2
Data Limitations	3
Results	4
Response Rate	4
Customer Service	4
Land Ownership Type	9
Wildlife-Caused Damage	9
Beaver	12
Coyote	15
Deer	17
Elk	19
Goose	21
Prairie Dog	23
Turkey	24
Other Wildlife	26
Closing Question Comments	27
References	34
Appendix A: Survey Instrument (format adjusted)	35

List of Figures

Figure 1. Count and percent response distribution to the question, “Did you have any difficulty finding information about how to contact GFP regarding your wildlife-associated damage?”.	4
Figure 2. Count and percent response distribution to the question, “How did you initially contact GFP about your wildlife-associate damage?”.	5
Figure 3. Count and percent response rating distribution that the GFP employee was knowledgeable.	6
Figure 4. Count and percent response rating distribution that the GFP employee was professional.	6
Figure 5. Count and percent response rating distribution that the GFP employee was responsive to the customer’s need or concern.	7
Figure 6. Count and percent response rating distribution that the GFP employee was courteous.	7
Figure 7. Count and percent response rating distribution that the GFP employee had a positive attitude.....	8
Figure 8. Count and percent distribution of primary land ownership types.	9
Figure 9. South Dakota with county names and GFP regional boundaries.	12
Figure 10. Count and percent of beaver-caused damage frequency of occurrence.	13
Figure 11. Count and percent of beaver-caused economic impact valuation.	14
Figure 12. Count and percent of coyote-caused damage frequency of occurrence.	15
Figure 13. Count and percent of coyote-caused economic impact valuation.	16
Figure 14. Count and percent of deer-caused damage frequency of occurrence.	17
Figure 15. Count and percent of deer-caused economic impact valuation.	18
Figure 16. Count and percent of elk-caused damage frequency of occurrence.	19
Figure 17. Count and percent of elk-caused economic impact valuation.	20
Figure 18. Count and percent of goose-caused damage frequency of occurrence.....	21
Figure 19. Count and percent of goose-caused economic impact valuation.....	22
Figure 20. Count and percent of turkey-caused damage frequency of occurrence.....	24
Figure 21. Count and percent of turkey-caused economic impact valuation.....	25

List of Tables

Table 1. Count and percent of cases for types wildlife.....	10
Table 2. Crosstabulation of wildlife species type by primary landownership type, presented by count and percentage of responses.....	11
Table 3. Descriptive statistics for customer satisfaction levels with beaver-caused damage services received during 2021.....	14
Table 4. Descriptive statistics for satisfaction levels with coyote-caused damage services received during 2021.....	16
Table 5. Descriptive statistics for satisfaction levels with deer-caused damage services received during 2021.	18
Table 6. Descriptive statistics for satisfaction levels with elk-caused damage services received during 2021.	20
Table 7. Descriptive statistics for satisfaction levels with goose-caused damage services received during 2021.	22
Table 8. Descriptive statistics for satisfaction levels with prairie dog-caused damage services received during 2021.....	23
Table 9. Descriptive statistics for customer satisfaction levels with turkey-caused damage services received during 2021.....	25

Introduction

According to the Public Trust Doctrine and reaffirmed through the North American Model of Wildlife Conservation, fish and wildlife populations are held in trust and managed by the agency within each state charged with conserving those resources for current and future public use and enjoyment (Organ et al. 2012). This public trust thinking is clearly reflected in South Dakota's Department of Game, Fish, and Parks' (GFP) 2021 Mission and Vision statements (<https://gfp.sd.gov/agency/>). With more than 85% percent of South Dakota held in private ownership, partnerships with landowners, farmers, and producers are critical to GFP's overall mission. Private lands in South Dakota provide important wildlife habitat for both game and non-game species, in addition to public access to these trust resources, which many South Dakotans and visitors enjoy every year. It is because of these important considerations that GFP operates an active, cooperative, and comprehensive Wildlife Damage Management (WDM) Program.

In 2019, the South Dakota Governor's Office selected the Wildlife Management Institute to conduct an independent, 10-year historical review of GFP's comprehensive WDM Program. As a result of this review and staff discussions, GFP developed a strategic plan specific to the issues of wildlife damage management in South Dakota. In 2021, the WDM Program Strategic Plan was presented to and adopted by GFP's Commission (https://gfp.sd.gov/userdocs/docs/wdm_draft_strategic_plan_updated_12.2.2020.pdf).

Within this plan, *Goal #1: Provide excellent customer service and program transparency* ensures internal and external program accountability. One action item identified by GFP staff was to develop a cost-effective and meaningful way to determine customer satisfaction and program successes. Accordingly, in 2022 GFP implemented the *Wildlife Damage Management (WDM) Program Customer Service Survey*. The purpose of this survey is to regularly assess overall customer service satisfaction, as well as to quantify and qualify wildlife damage management services and needs in South Dakota. In addition to customer service-related questions, survey participants were asked about five aspects related to their wildlife-associated damage during 2021.

1. where the wildlife damage occurred
2. frequency of the wildlife damage
3. estimated economic impact from the wildlife damage
4. types of WDM Program services your received and your level of satisfaction or dissatisfaction with each
5. overall effectiveness of GFP's WDM Program in addressing the wildlife damage

Following the methods section, data are summarized by the following sections: survey sample, customer service, land ownership type, and wildlife damage assessments for seven wildlife species that comprise the bulk of WDM Program service requests (e.g., beaver, coyote, elk, deer, prairie dog, turkey). Respondents were also given the opportunity to tell GFP if they received services for 'other wildlife'. This report is not is not an exhaustive statistical review and synthesis of all data collected, nor does it discuss findings or make WDM Program management recommendations.

Methods

A mixed-methods approach is a research design popular in social science disciplines, in which researchers collect, analyze, and integrate both quantitative (e.g., counts, numbers) and qualitative (e.g., text, pictures) data. Using both qualitative and quantitative means of data-collection offsets weaknesses inherent to each method, while also strengthening the interpretation phase of data analysis through data integration. Numerous peer-reviewed studies demonstrate that a mixed-methods approach enhances applied research when the aim is to identify and describe multiple stakeholder perspectives or where researchers desire a more complete understanding of a phenomenon, particularly from the perspective of the population of interest (Creswell & Clark 2018). Hence, mixed-method approaches enhance a robust research protocol because they allow researchers to confirm quantitative findings with qualitative experiences.

Sampling Frame

The sampling frame consists of all 2021 WDM customers for whom GFP has an email and mailing address (i.e., not randomly selected). Due to incomplete or incorrect contact information and challenges associated with filtering the existing database, the sampling frame does not include all 2021 customers, nor can we determine what proportion of the total the sample represents. As such, the survey sample is akin to a convenience sample because only those customers with an email and mailing address were sampled.

Survey Administration

Every survey situation is unique and what works well in one context may not in another. Recognizing this, ‘tailored design’ refers to customizing survey procedures to encourage all sample members to respond to the survey (Dillman et al. 2014). Numerous social science studies show that when comparing single mode surveys (e.g., internet only) to mixed-mode surveys (e.g., paper and internet), the latter can improve response rates while reducing non-response and coverage errors.

To minimize cost this survey was administered using a single mode (i.e., Qualtrics’ online survey platform). To announce the survey and to clarify the Qualtrics’ email used to distribute the online link, a postcard was mailed to all in the sample. Participants were emailed a personalized invite letter describing the opportunity to provide feedback to GFP via online survey through a secure link. Three reminder emails were sent, each one week apart.

Statistical Analysis

The practical application for statistical analysis is that it provides unbiased data from which GFP and WDM Program managers can make informed operational and management decisions. Additionally, it provides the foundation for developing scientifically-defensible policy that also is acceptable to affected stakeholders. The following computerized software was used to summarize and analyze survey data: Microsoft Excel and IBM SPSS Statistics (Version 27).

Descriptive Data

Descriptive statistics summarize the data's: (1) central tendency (i.e., the location of the data distribution using mean, median, mode), (2) dispersion around the central tendency (e.g., standard deviation, range, percent distribution), and (3) distribution of responses (e.g., frequency, percentage of responses). These statistical measures describe the basic features of the data and provide simple summaries about the sample and the measures. For instance, calculating the frequency (i.e., count) and percent of categorical variables (e.g., landowner type, attitudes, age) can be used to describe the sample by assessing the distribution of responses. Together with simple graphics analysis, descriptive measures form the basis of virtually every quantitative analysis strategy by helping to simplify and describe large amounts of data in a sensible way. Additionally, descriptive data often helps inform targeted communications, outreach, and education strategies, in addition to strategic planning needs and direction.

Cross-Tabulation Tables

Describing and understanding more complex research and management questions require a statistical cross-tabulation approach which assesses the association of multiple variables (nominal and ordinal) in a single table where columns correspond to independent variables and each row to dependent variables. Cross-tabulation tables are used to obtain the expected number of cases under the assumption of no relationship between the two variables. The most widely used statistical test used with a cross tabulation is the chi-square statistic (χ^2) test (or test for independence) with a p-value <0.05 to determine significance. The Chi-square test tells you whether the relationship between two categorical variables is significant. However, when 20% or more of contingency table cells have less than the expected count certain test statistics (e.g., chi-square analysis of association, effect size) cannot be accurately calculated. This often results in surveys with small sample sizes; especially, when analyzing *N*-way tables (i.e., higher than 2-by-2 or bivariate tables). It is important to note that while multiple response variables (i.e., questions in which respondents may select more than one answer choice) can be summarized and used in cross-tabulation tables (e.g., selected wildlife species by landowner type), Chi-square (χ^2) statistical tests and effect sizes cannot be accurately calculated with this type of variable.

Psychometrics and Likert-Type Scale Measurement

The psychometrics field in psychology looks at the theory and technique of psychological measurement, which quantifies knowledge, abilities, attitudes, and personality traits (American Psychological Association 2020). Increasingly, natural resources conservation and management challenges and opportunities are linked inextricably to human attitudes, beliefs, norms, and value orientations (i.e., social constructs). Because these attributes cannot be directly observed and measured, social scientists make indirect inferences from survey responses to questions that serve as proxies. A 'Likert scale' is a type of psychometric response scale (e.g., a 7 point scale from 1=strongly disagree to 7=strongly agree) is often seen in surveys and is by definition a multiple-item scale designed to create summated rating scales for measuring social constructs like attitudes, beliefs, or norms (Likert 1932). It is important to note that disagreement exists amongst scholars about whether Likert-scaled data should be analyzed with parametric statistics (e.g., t-test, analysis of variance, regression) or nonparametric statistics (e.g., Mann-Whitney test,

Wilcoxon signed-rank test, Kruskal-Wallis test). Often the difference in statistical approach depends on the analyzed distribution of a given dataset (Carifio & Perla 2008, Jamieson 2004).

In contrast, a ‘Likert-type scale’ is used to measure a single item and is never combined with other measured items to create a summated scale. All questions in this survey are Likert-type scale measurements. Understanding the difference between the two is critical to selecting the appropriate statistical analysis and interpreting the data. Responses to a single Likert-type scale item are treated as nominal or ordinal data (not interval nor ratio); however, one cannot assume that respondents perceive differences between adjacent levels as equidistant, particularly when using ≤ 5 response levels (Cohen 1988). Because of this, the mean (or average), and sometimes the median (or middle value), should not be calculated from nominal or ordinal variables to measure the variable’s central tendency.

Data Limitations

For data to be generalized beyond the sample, it is critical that every customer has an equal probability of being selected from the total population. Due to sampling frame limitations (i.e., incomplete or incorrect email contact information) and a desire to minimize costs (i.e., single mode), the survey was administered using a convenience sampling approach. Accordingly, data cannot be generalized to the larger population of all WDM customers who received services in 2021. Because convenience sampling is a non-probability method, which is typically less expensive to conduct, data often have an extremely high level of bias.

Despite the enormous disadvantages of convenience sampling that stem from an inability to draw statistically significant conclusions from findings obtained, convenience sampling does still have some uses. It can be helpful in obtaining a range of attitudes and opinions, in addition to identifying tentative hypotheses to be tested more rigorously in future research. Moreover, the data, although biased to an unknowable degree, does represent those who participated in the survey and should not be entirely discounted. Instead, findings should be cautiously interpreted and applied to program decision-making.

Results

Response Rate

A total of 1,223 WDM Program customers with an email and a mailing address were selected from GFP's Private Lands database to receive the inaugural customer service survey. Correcting for undeliverable email survey invites (e.g., incorrect email addresses, incorrect person to contact regarding services received, blocked or bounced survey invite emails) the adjusted sample size was 1,105 customers. All surveys were administered online via Qualtrics survey platform (i.e., single-mode data collection method) and respondents could choose whether to access the survey through a secure link embedded in an email or by using a secure QR code on mailed postcards.

The response rate was 32% (n=348) [86% email invite (n=298), 14% QR code (n=50)]; however, 47 participants reported they did not receive wildlife damage services from GFP during 2021. As such, the adjusted sample size was 1,058 customers with a 29% (n=301) adjusted response rate. Because of sampling frame challenges data should be cautiously interpreted and applied to decision-making (see data limitations section pg. 3).

Customer Service

80% (n=280) of customers reported not having difficulty finding information about how to contact GFP regarding your wildlife-associated damage (Figure 1). When asked how they initially contact GFP about their wildlife-associated damage, 44% (n=128) contacted a GFP Conservation Officer and 42% (n=121) contacted a GFP Wildlife Damage Specialist (Figure 2).

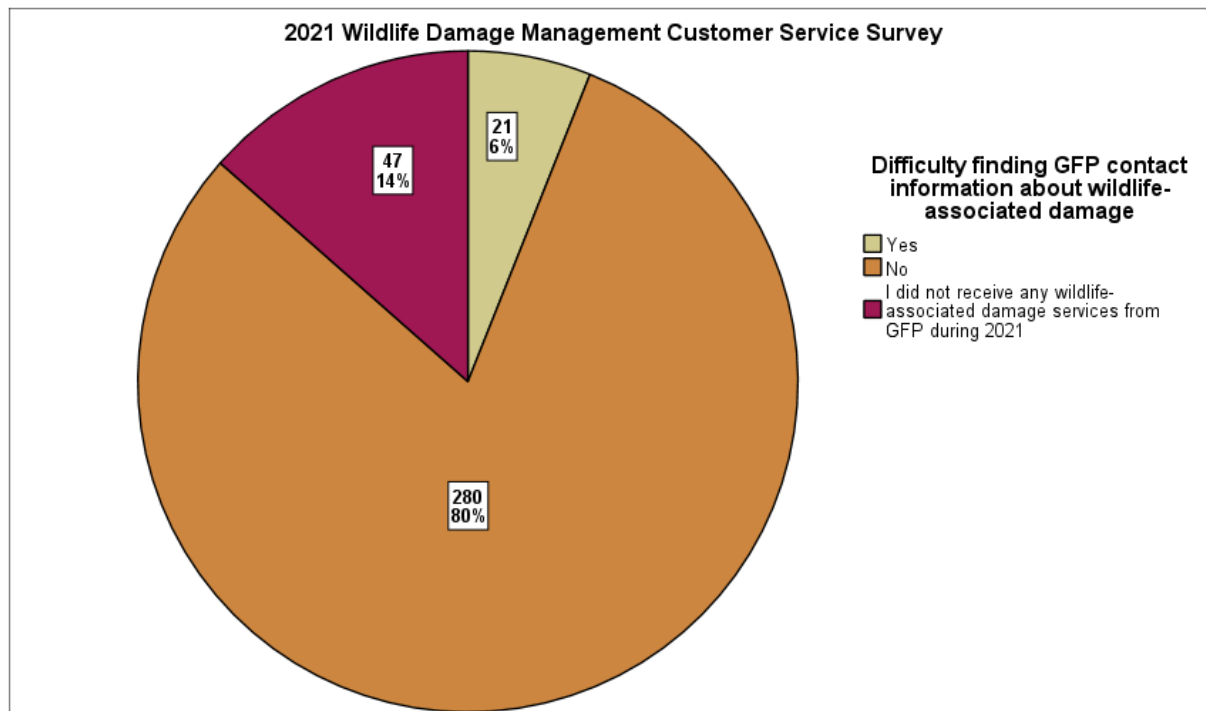


Figure 1. Count and percent response distribution to the question, “Did you have any difficulty finding information about how to contact GFP regarding your wildlife-associated damage?”.

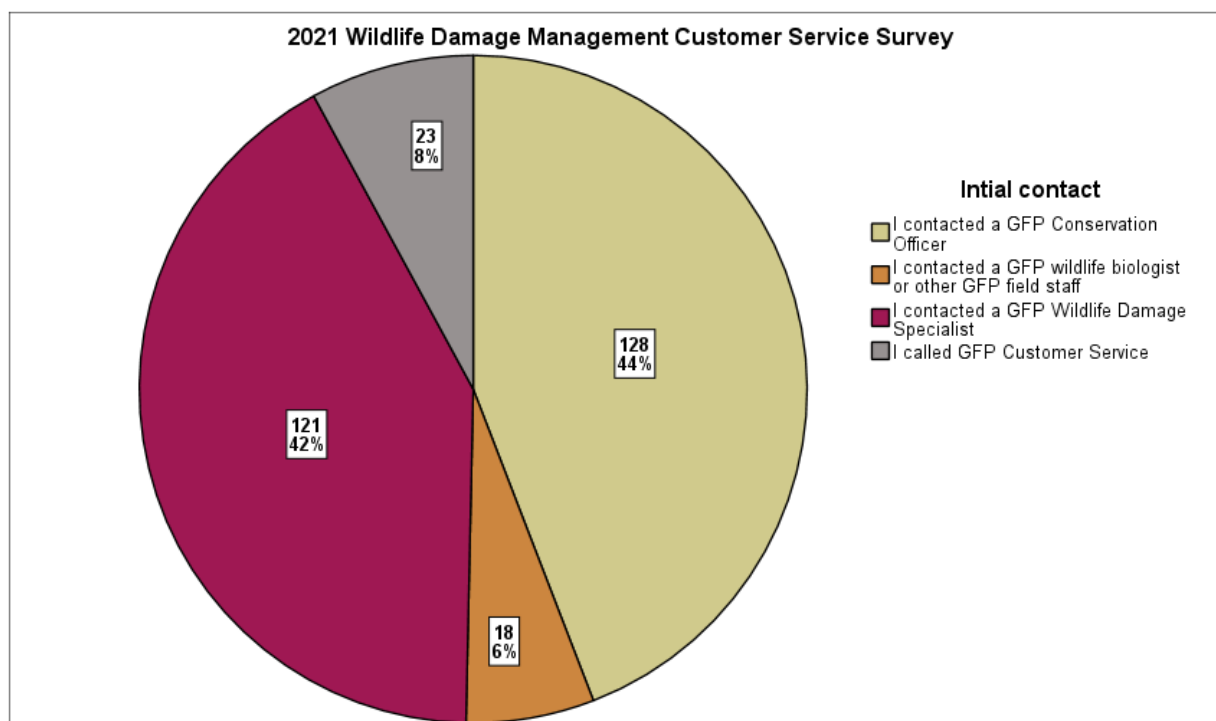


Figure 2. Count and percent response distribution to the question, “How did you initially contact GFP about your wildlife-associate damage?”.

Using a 4-point Likert-type rating scale (1=poor, 2=fair, 3=good, 4=excellent), WDM Program customers were asked to rate five aspects related to their interaction with the GFP employee with whom they initially spoke concerning their wildlife-associated damage. The majority of customers rated GFP employees as excellent or good.

- Person was knowledgeable (Figure 3): 63% excellent and 33% good
- Person was professional (Figure 4): 67% excellent and 30% good
- Person was responsive to my need or concern (Figure 5): 66% excellent and 27% good
- Person was courteous (Figure 6): 68% excellent and 29% good
- Person had a positive attitude (Figure 7): 67% excellent and 31% good

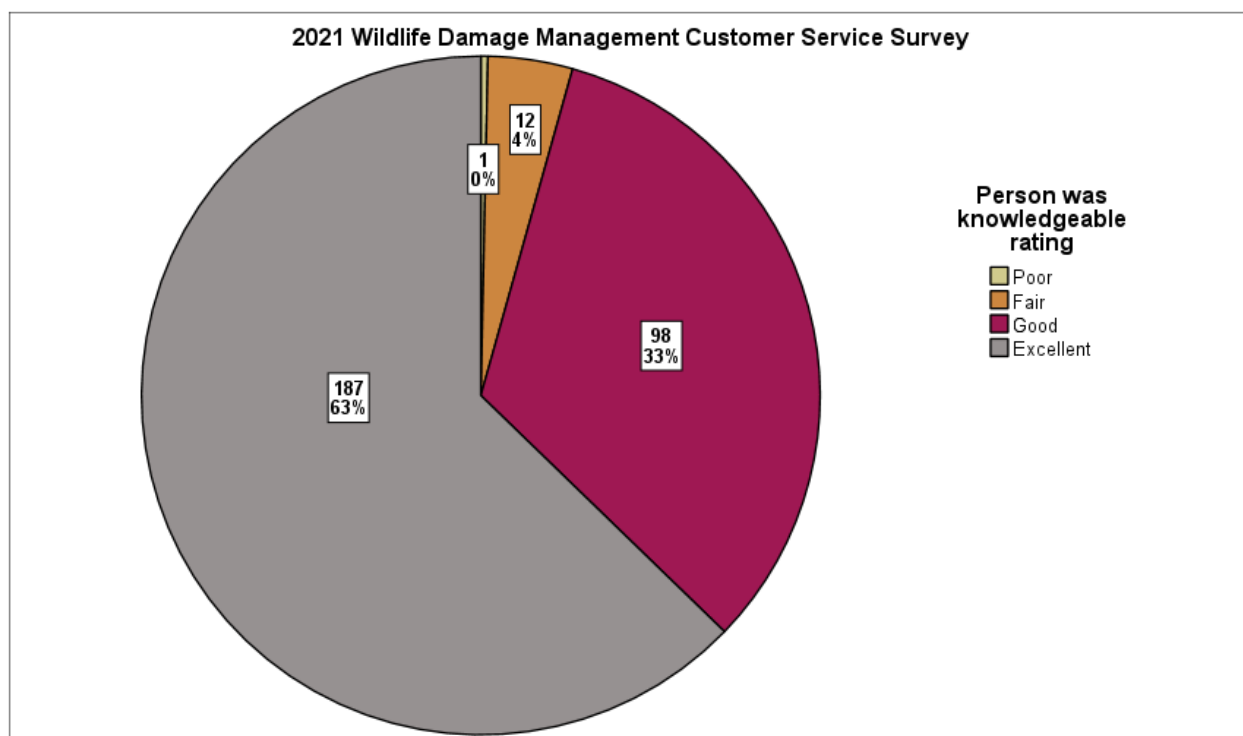


Figure 3. Count and percent response rating distribution that the GFP employee was knowledgeable.

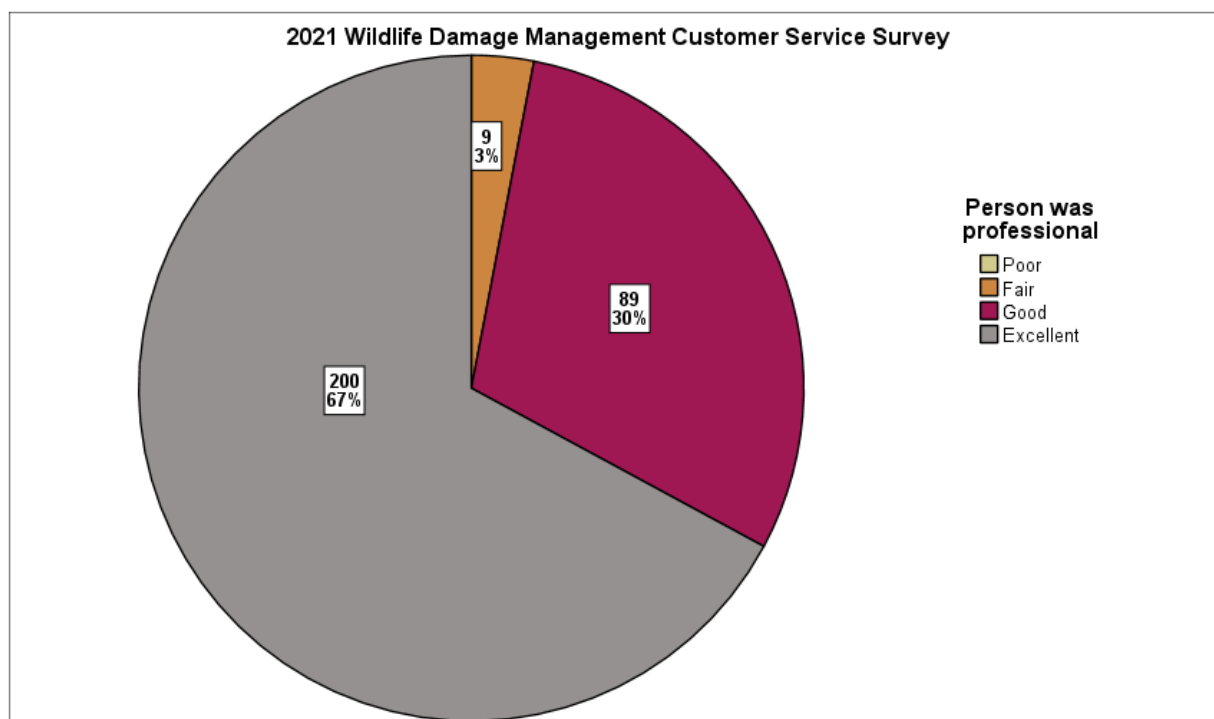


Figure 4. Count and percent response rating distribution that the GFP employee was professional.

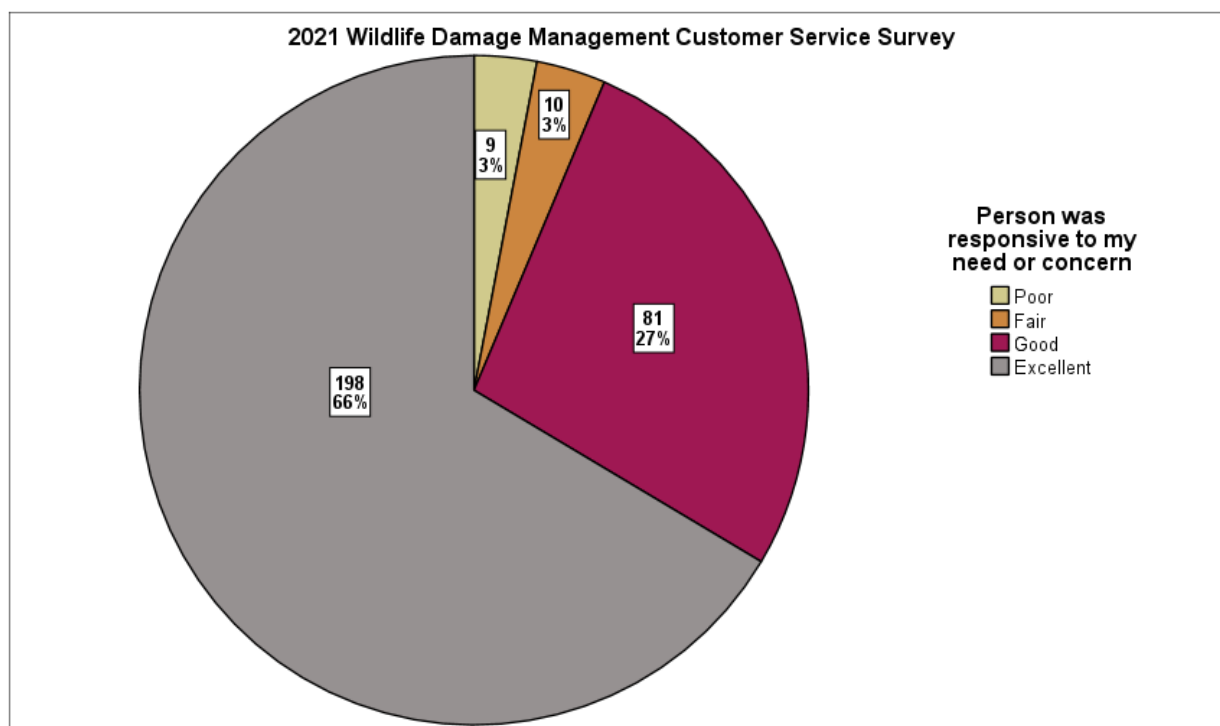


Figure 5. Count and percent response rating distribution that the GFP employee was responsive to the customer's need or concern.

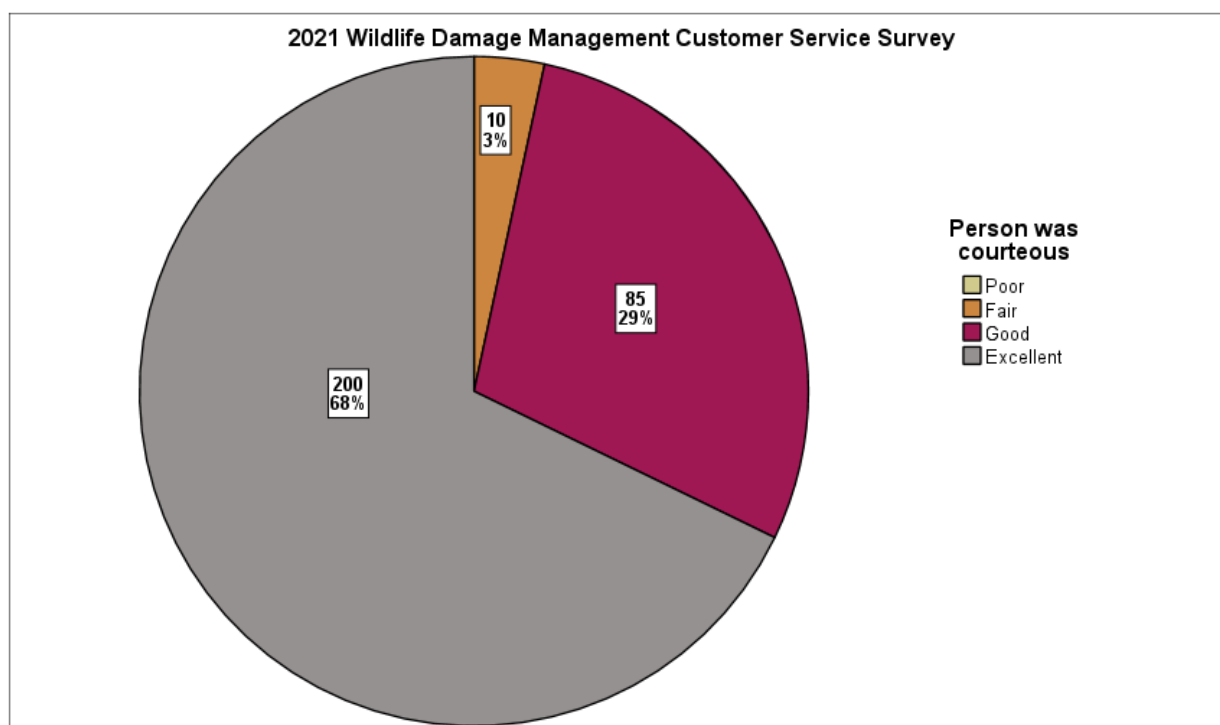


Figure 6. Count and percent response rating distribution that the GFP employee was courteous.

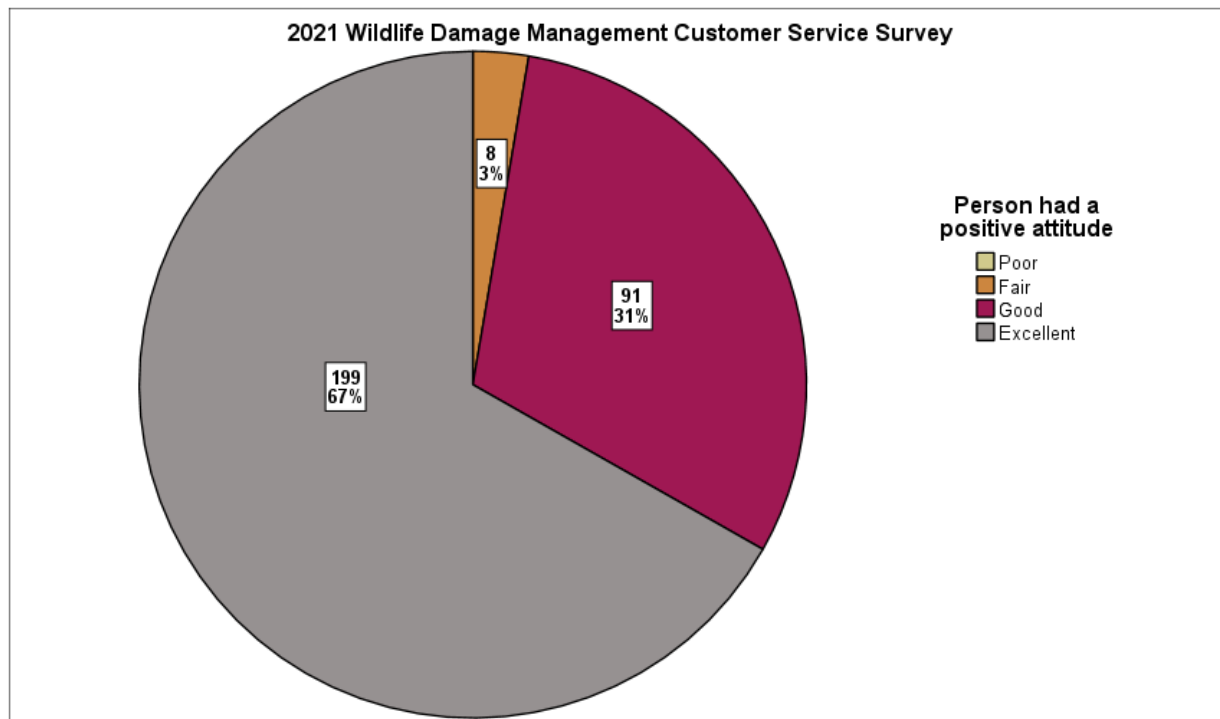


Figure 7. Count and percent response rating distribution that the GFP employee had a positive attitude.

Land Ownership Type

Of the customers who completed the survey, 50% (n=148) of land ownership was exclusively farming, followed by 14% (n=41) were equal farming and ranching and 13% (n=38) were mostly farming and some ranching (Figure 8). About 5% (n=16) of customers that selected ‘other landowner type’ and were asked to provide a text response describing their ownership type. Responses varied among customers (n=13) and sometimes included multiple descriptions of identified landowner types: mix of homeowner, homestead, farmstead, farming, haying, pasture, and/or livestock (n=5), golf course (n=3), hobby farm or raise chicken and ducks (n=2), wildlife habitat (n=1), a little farming and wildlife habitat (n=1), aerial spray business (n=1).

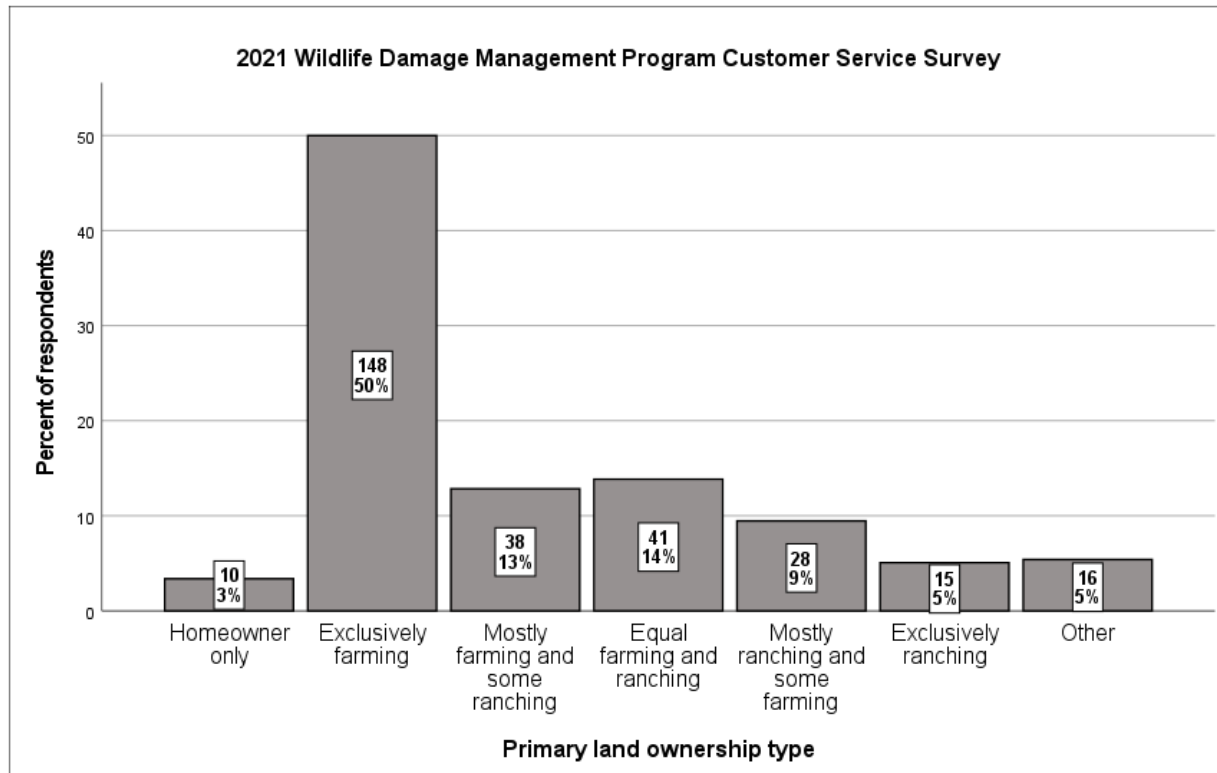


Figure 8. Count and percent distribution of primary land ownership types.

Wildlife-Caused Damage

For simplicity and an orderly presentation, survey data and findings are summarized by seven wildlife species that comprise the bulk of WDM service requests (e.g., beaver, coyote, elk, deer, prairie dog, turkey). Respondents were also given the opportunity to name and tell GFP if they received services for ‘other wildlife’.

Customers were asked about which species they contacted GFP for services during 2021. Table 1 reports the selected count and percent of prevalence among the survey sample. Note, the percentage exceeds 100 because customers could select more than one. Of the listed wildlife species, 76% (n=230) of customers selected one and 20% (n=60) selected two. A little over half of the customers who participated in this survey contacted GFP about goose-caused damage

[60% (n=180)], followed by 27% (n=80) coyote-caused damage, and 22% (n=67) beaver-caused damage. The following other wildlife species (n=11) were selected: badger (n=2), dickcissel (n=1), gull (n=1), hawk (n=1), mink (n=3), mountain lion (n=1), red fox (n=1), and wolf (n=1).

Table 1. Count and percent of cases for types wildlife.

2021 Wildlife Damage Management Program Customer Service Survey		
Species	<i>n</i>	% of respondents (n=301)
Beaver	67	22.3
Coyote	80	26.6
Deer	32	10.6
Elk	4	1.3
Goose	180	59.8
Prairie dog	2	0.7
Turkey	8	2.7
Other wildlife	11	4.0
Total	385	129%

Note: percentage exceeds 100 because respondents could select more than one wildlife species.

To compare differences in wildlife species selected among primary landowner types, a cross-tabulation was conducted and data presented by percent of responses (Table 2). Total wildlife species counts differ from Table 1 because not all respondents who answered the species question also completed the landowner type question. The most often selected wildlife species by landowner type are as follows:

- Homeowner only: 82% (n=9) beaver
- Exclusively farming: 74% (n=129) goose
- Mostly farming, some ranching: 52% (n=28) goose
- Equal farming and ranching: 47% (n=27) coyote
- Mostly ranching, some farming: 55% (n=23) coyote
- Exclusively ranching: 55% (n=13) coyote
- Other: 39% (n=7) beaver, 22% (n=4) goose

Table 2. Crosstabulation of wildlife species type by primary landownership type, presented by count and percentage of responses.

2021 Wildlife Damage Management Program Customer Service Survey								
Species	Homeowner only	Exclusively farming	Mostly farming, some ranching	Equal farming and ranching	Mostly ranching, some farming	Exclusively ranching	Other	Total
Beaver	9 (82%)	28 (16%)	6 (11%)	8 (14%)	6 (14%)	3 (13%)	7 (39%)	67 (18%)
Coyote	-	5 (3%)	8 (15%)	27 (47%)	23 (55%)	13 (57%)	3 (17%)	79 (21%)
Deer	1 (9%)	9 (5%)	7 (13%)	7 (12%)	4 (10%)	3 (13%)	-	31 (8%)
Elk	-	-	-	-	1 (2%)	2 (9%)	1 (6%)	4 (1%)
Goose	1 (9%)	129 (74%)	28 (52%)	12 (21%)	3 (7%)	-	4 (22%)	177 (47%)
Prairie dog	-	-	-	-	1 (2%)	1 (4%)	-	2 (<1%)
Turkey	-	2 (1%)	1 (2%)	3 (5%)	1 (2%)	-	1 (6%)	8 (2%)
Other wildlife	-	1 (1%)	4 (7%)	-	3 (7%)	1 (4%)	2 (11%)	11 (3%)
Total	11 (3%)	174 (46%)	54 (14%)	57 (15%)	42 (11%)	23 (6%)	18 (5%)	379 (100%)

For each wildlife species selected, customers were asked about five aspects related to their wildlife-associated damage during 2021.

1. where the wildlife damage occurred
2. frequency of the wildlife damage
3. estimated economic impact from the wildlife damage
4. types of WDM Program services your received and your level of satisfaction or dissatisfaction with each
5. overall effectiveness of GFP's WDM Program in addressing the wildlife damage

Customers used the below map to indicate where their wildlife-associated damage occurred. Data is presented in the following order: beaver, coyote, elk, deer, goose, prairie dog, turkey.

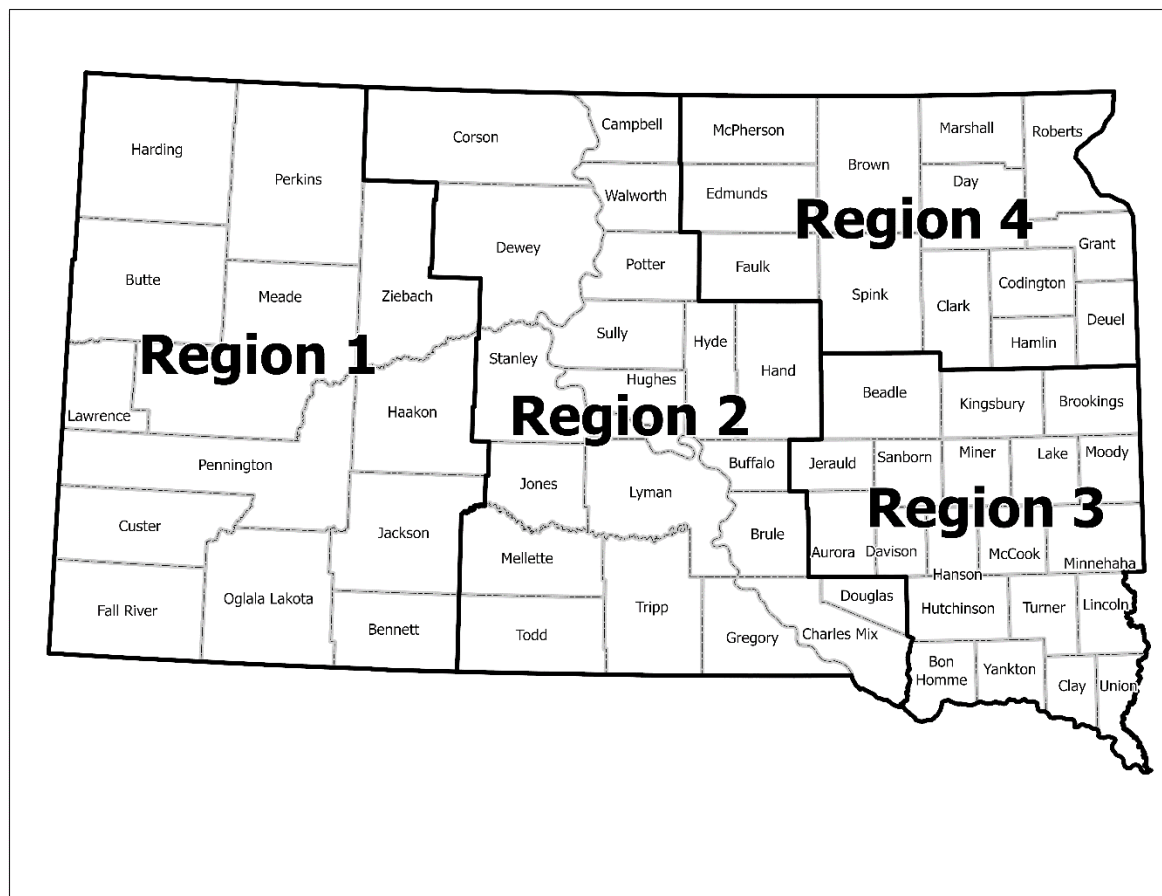


Figure 9. South Dakota with county names and GFP regional boundaries.

Beaver

About 22% (n=67) of customers who participated in this survey contacted GFP about beaver-caused damage during 2021 (Table 1). Almost half of beaver-related service calls occurred in Region 4 [49% (n=33)], followed by 42% (n=28) in Region 3. Reported service calls for Regions 1 and 2 were about 4% (n=3) each. About 42% (n=28) of customers reported their beaver-caused damage as a recurring problem for more than five years, followed by 25% (n=17) recurring problem over last two to four years and responses were evenly split (11% each) between new damage in 2021 that is recurring or occurred one time (Figure 9). Almost half of responding customers valued their beaver-caused economic impact as \$999 or less [48% (n=30)] and 35% (n=22) as \$1,000 - \$4,999 dollars, while 15% (n=11) valued their economic impact as \$5,000 dollars or greater (Figure 10).

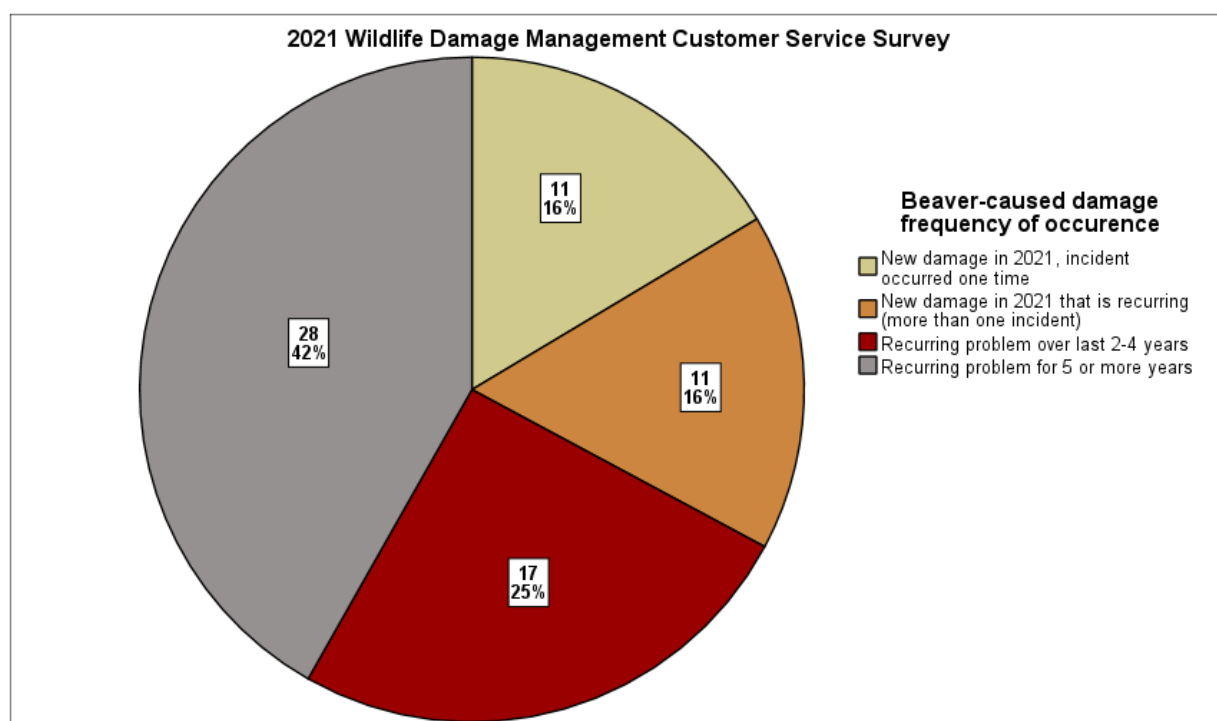


Figure 10. Count and percent of beaver-caused damage frequency of occurrence.

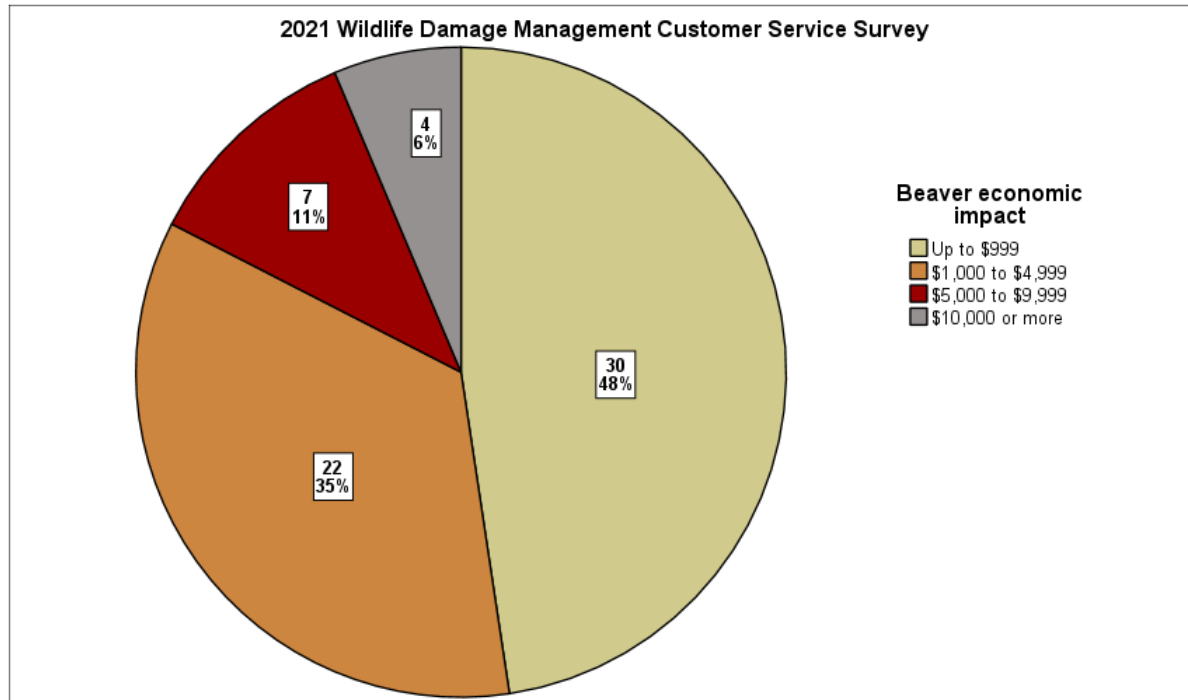


Figure 11. Count and percent of beaver-caused economic impact valuation.

Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their beaver-caused damage. Customers most often reported (i.e., mode) being very satisfied with beaver-caused damage services (Table 3). Of customers who rated the overall effectiveness of GFP's WDM Program in addressing their beaver-caused damage, 68% (n=45) reported very effective, followed by 26% (n=17) moderately effective, and 6% (n=4) not effective at all.

Table 3. Descriptive statistics for customer satisfaction levels with beaver-caused damage services received during 2021.

2021 Wildlife Damage Management Program Customer Service Survey			
Beaver-Caused Damage Service	Mean*	Median	Mode
Technical information and/or advice (n=60)	4.58	5	5
Provided loaner equipment and/or supplies (e.g., live traps, snares) (n=27)	4.44	5	5
Direct assistance from a GFP Wildlife Damage Specialist (n=62)	4.66	5	5
Alteration of the habitat to discourage nuisance wildlife (n=31)	4.39	5	5
Exclusion of nuisance wildlife with fencing or other methods (n=18)	4.22	5	5
Deterring nuisance wildlife with noise, visual, or chemical methods (n=11)	4.00	5	5

*mean value is not an appropriate calculation for Likert-type 5-point scale questions. Due to fluctuating and sometimes very small sample sizes, mode is the appropriate central tendency descriptive statistic for this data.

Coyote

About 27% (n=80) of customers who participated in this survey contacted GFP about coyote-caused damage during 2021 (Table 1). About 38% (n=30) coyote-related service occurred in Region 4, followed by 28% (n=22) in Region 3, 22% (n=17) in Region 1, and 13% (n=10) in Region 2. A little over half of customers [57% (n=45)] reported their coyote-caused damage as a recurring problem for more than five years, followed by 25% (n=20) recurring problem over last two to four years, 11% (n=9) new damage in 2021 that is recurring, and 6% (n=5) new damage in 2021 that occurred one time (Figure 11). Almost 44% (n=33) of responding customers valued their coyote-caused economic impact as \$1,000 - \$4,999 dollars and 37% (n=28) \$999 or less, while 13% (n=10) selected \$5,000 to \$9,999 dollars and 5% (n=4) valued their economic impact as \$10,000 dollars or greater (Figure 12).

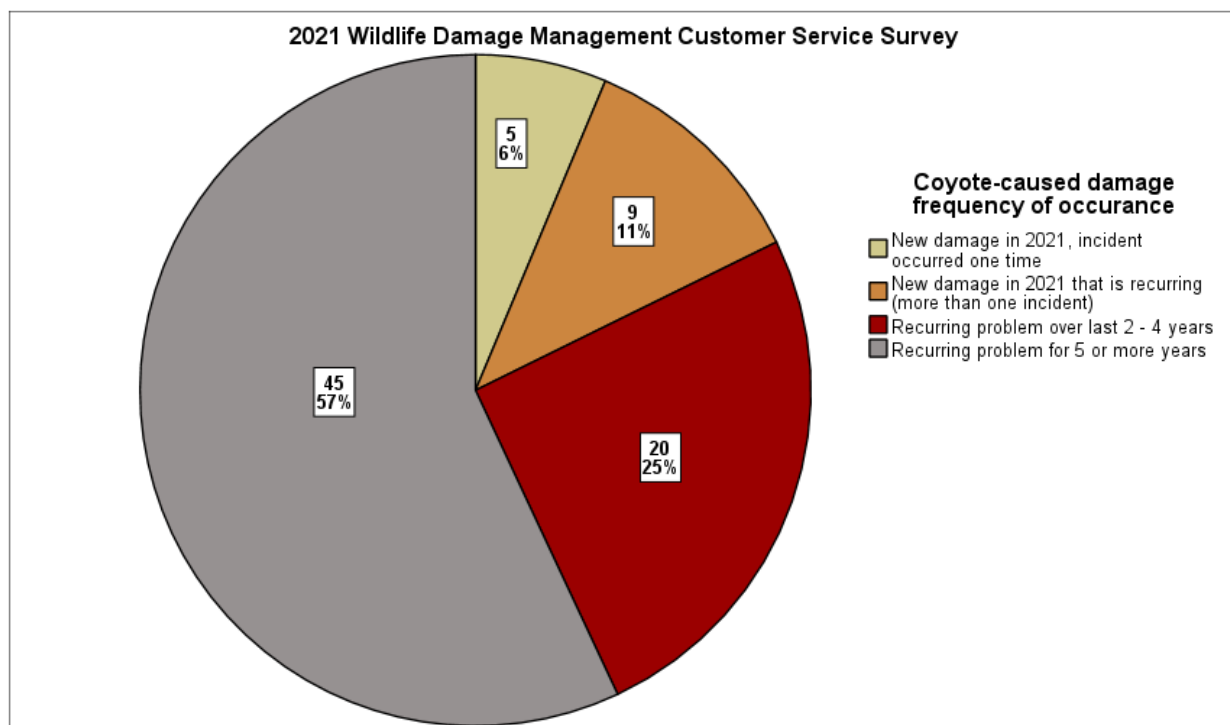


Figure 12. Count and percent of coyote-caused damage frequency of occurrence.

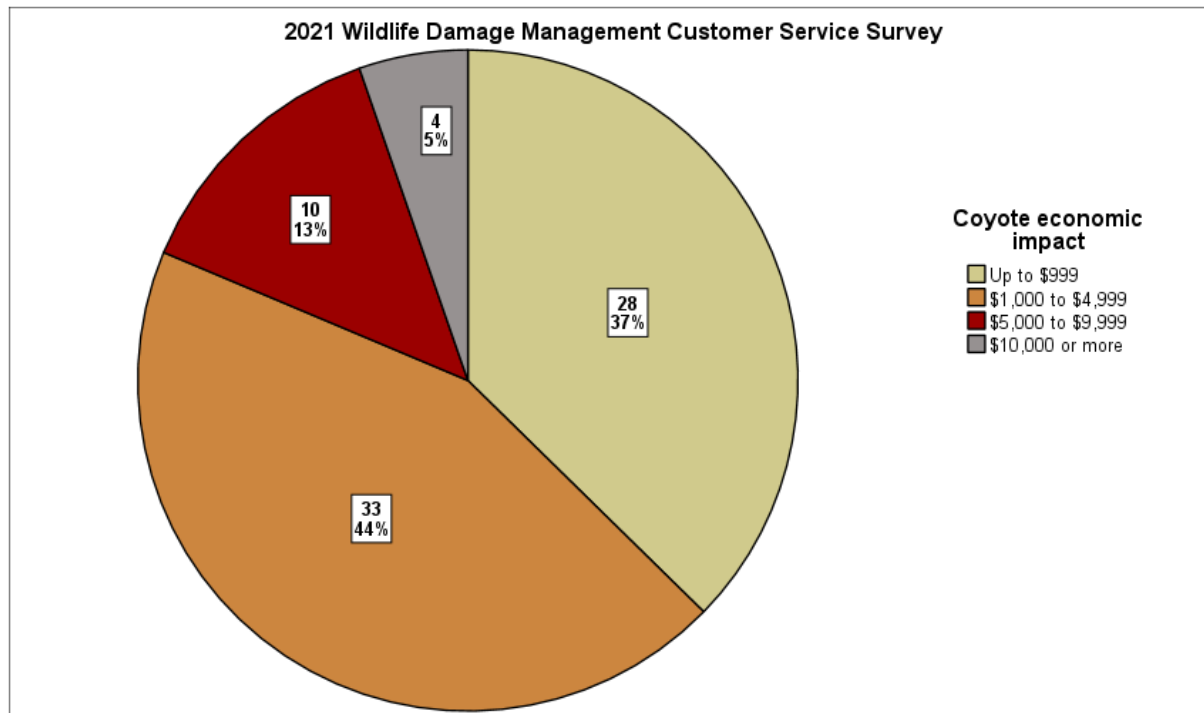


Figure 13. Count and percent of coyote-caused economic impact valuation.

Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their coyote-caused damage. Customers most often reported (i.e., mode) being very satisfied with coyote-caused damage services received (Table 4). Of customers who rated the overall effectiveness of GFP's WDM Program in addressing their coyote-caused damage, half [50% (n=39)] reported moderately effective, followed by 42% (n=32) very effective and 8% (n=6) not effective at all.

Table 4. Descriptive statistics for satisfaction levels with coyote-caused damage services received during 2021.

2021 Wildlife Damage Management Program Customer Service Survey			
Coyote-Caused Damage Service	Mean*	Median	Mode
Technical information and/or advice (n=66)	4.42	5	5
Provided loaner equipment and/or supplies (e.g., live traps, snares) (n=30)	4.37	5	5
Direct assistance from a GFP Wildlife Damage Specialist (n=75)	4.44	5	5
Alteration of the habitat to discourage nuisance wildlife (n=26)	3.92	4	5
Exclusion of nuisance wildlife with fencing or other methods (n=24)	3.83	4	5
Deterring nuisance wildlife with noise, visual, or chemical methods (n=23)	4.26	5	5

*mean value is not an appropriate calculation for Likert-type 5-point scale questions. Due to fluctuating and sometimes very small sample sizes, mode is the appropriate central tendency descriptive statistic for this data.

Deer

About 11% (n=32) of customers who participated in this survey contacted GFP about deer-caused damage during 2021 (Table 1). Almost half of deer-related service calls occurred in Region 4 [48% (n=15)], followed by 39% (n=12) in Region 3, 10% (n=3) in Region 1, and 3% (n=1) in Region 2. About 61% (n=19) of customers reported their deer-caused damage as a recurring problem for more than five years, followed by 29% (n=9) recurring problem over last two to four years, 6% (n=2) new damage in 2021 that is recurring, and 4% (n=1) new damage in 2021 that occurred one time (Figure 13). About 42% (n=13) of responding customers valued their deer-caused economic impact as \$1,000 - \$4,999 dollars and 26% (n=8) \$10,000 dollars or greater, while 23% (n=7) selected \$999 dollars or less, and 10% (n=3) valued their economic impact as \$5,000 to \$9,999 dollars (Figure 14).

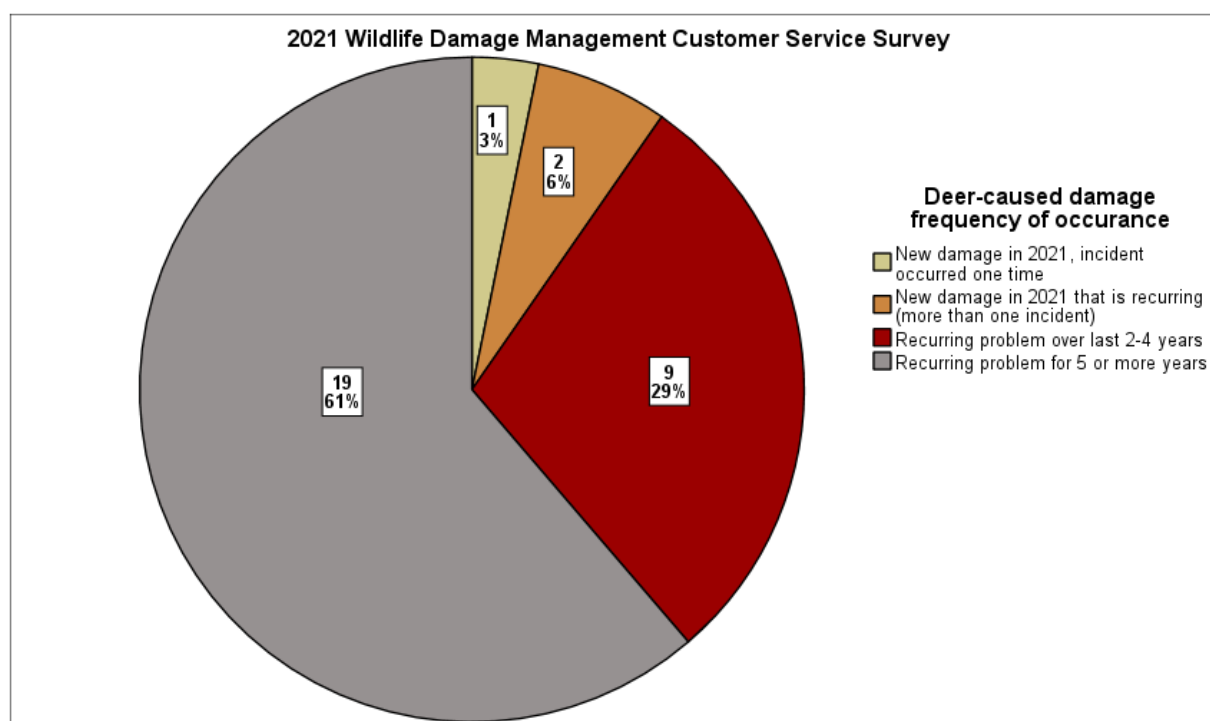


Figure 14. Count and percent of deer-caused damage frequency of occurrence.

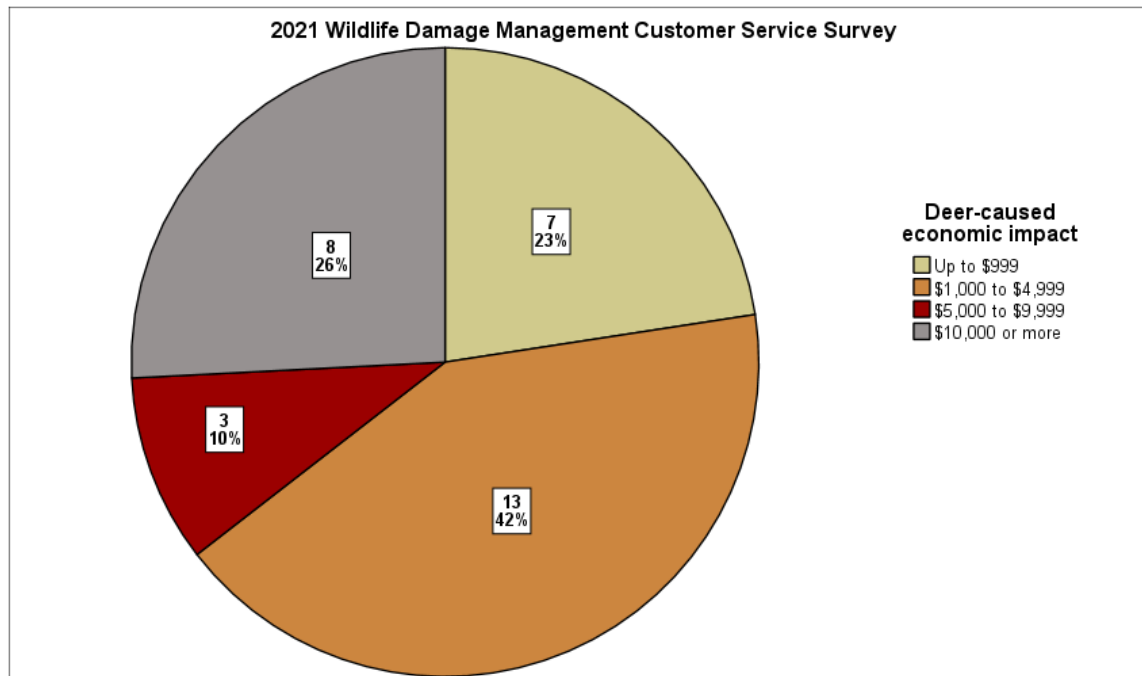


Figure 15. Count and percent of deer-caused economic impact valuation.

Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their deer-caused damage. There was variation in levels of satisfaction across provided deer-caused damage services, but customers generally rated their levels of satisfaction as somewhat satisfied or very satisfied (Table 5). Additionally, 47% (n=14) of customers rated the overall effectiveness of GFP's Wildlife Damage Management Program in addressing their deer-caused damage as moderately effective, 30% (n=9) not effective at all, and 23% (n=7) very effective.

Table 5. Descriptive statistics for satisfaction levels with deer-caused damage services received during 2021.

2021 Wildlife Damage Management Program Customer Service Survey			
Deer-Caused Damage Service	Mean*	Median	Mode
Technical information and/or advice (n=23)	3.91	4	5
Provided loaner equipment and/or supplies (e.g., live traps, snares) (n=19)	3.89	5	5
Direct assistance from a GFP Wildlife Damage Specialist (n=24)	3.83	4	5
Alteration of the habitat to discourage nuisance wildlife (n=19)	3.42	4	4
Exclusion of nuisance wildlife with fencing or other methods (n=24)	3.79	4	5
Deterring nuisance wildlife with noise, visual, or chemical methods (n=15)	3.33	4	4

*mean value is not an appropriate calculation for Likert-type 5-point scale questions. Due to fluctuating and sometimes very small sample sizes, mode is the appropriate central tendency descriptive statistic for this data.

Elk

About 1% (n=4) of customers who participated in this survey contacted GFP about beaver-caused damage during 2021 (Table 1). Three-quarters of elk-related service calls occurred in Region 1 [75% (n=3)] and 25% (n=1) in Region 4. One customer reported their elk-caused damage as a recurring problem for more than five years, one reported as recurring problem over last two to four years, one selected new damage in 2021 that is recurring, and one reported new damage in 2021 that occurred one time (Figure 15). Three-quarters of responding customers valued their elk-caused economic impact as \$999 or less [75% (n=3)] and 25% (n=1) as \$5,000 dollars or greater (Figure 16).

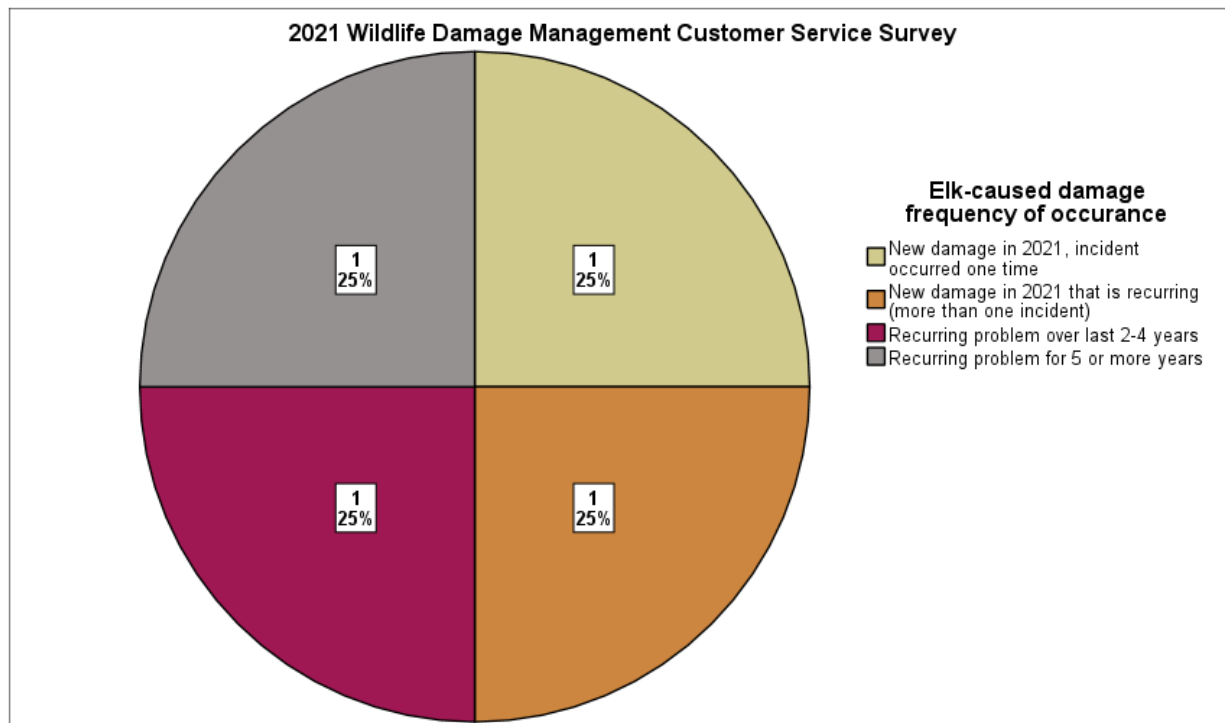


Figure 16. Count and percent of elk-caused damage frequency of occurrence.

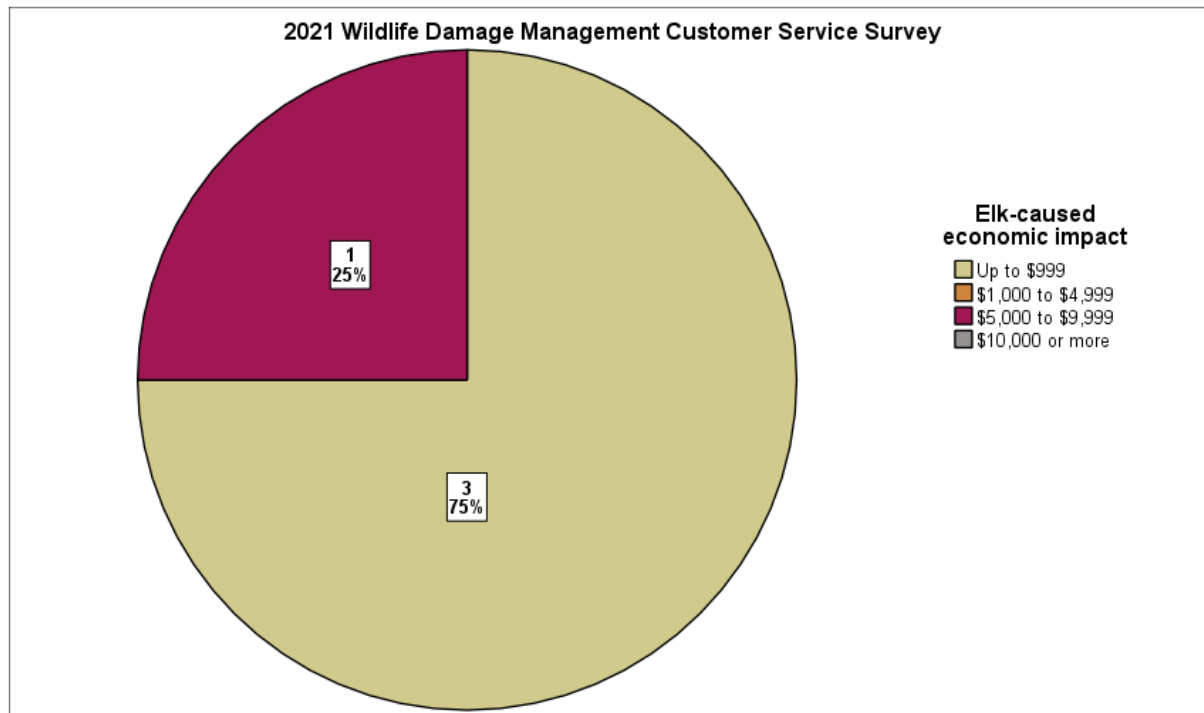


Figure 17. Count and percent of elk-caused economic impact valuation.

Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their elk-caused damage. Customers reported (i.e., mode) being very satisfied with four of the elk-caused damage services provided and somewhat dissatisfied with one (Table 6). Additionally, 75% (n=3) rated the overall effectiveness of GFP's Wildlife Damage Management Program in addressing their elk-caused damage as very effective and 25% as not effective at all.

Table 6. Descriptive statistics for satisfaction levels with elk-caused damage services received during 2021.

2021 Wildlife Damage Management Program Customer Service Survey			
Elk-Caused Damage Service	Mean*	Median	Mode
Technical information and/or advice (n=4)	4.75	5	5
Provided loaner equipment and/or supplies (e.g., live traps, snares) (n=4)	4.75	5	5
Direct assistance from a GFP Wildlife Damage Specialist (n=4)	4.75	5	5
Alteration of the habitat to discourage nuisance wildlife (n=3)	4.33	5	5
Exclusion of nuisance wildlife with fencing or other methods (n=4)	4.00	4	3 ^a
Deterring nuisance wildlife with noise, visual, or chemical methods (n=2)	2.50	2.5	2 ^a

*mean value is not an appropriate calculation for Likert-type 5-point scale questions. Due to fluctuating and sometimes very small sample sizes, mode is the appropriate central tendency descriptive statistic for this data.

^a Due to very small sample size, multiple modes exist. The smallest value is shown.

Goose

About 60% (n=180) of customers who participated in this survey contacted GFP about goose-caused damage during 2021 (Table 1). A little over half of goose-related service calls occurred in Region 4 [55% (n=97)], followed by 42% (n=74) in Region 3 and 3% (n=6) in Region 2. About 65% (n=113) of customers reported their goose-caused damage as a recurring problem for more than five years, followed by 26% (n=46) recurring problem over last two to four years and responses were evenly split (5% each) between new damage in 2021 that is recurring or occurred one time (Figure 17). Almost half of responding customers valued their goose-caused economic impact \$1,000 - \$4,999 [46% (n=79)], 23% (n=39) as \$5,000 - \$9,999 dollars, 19% (n=33) as \$999 or less, and 12% (n=21) as \$10,000 dollars or greater (Figure 18).

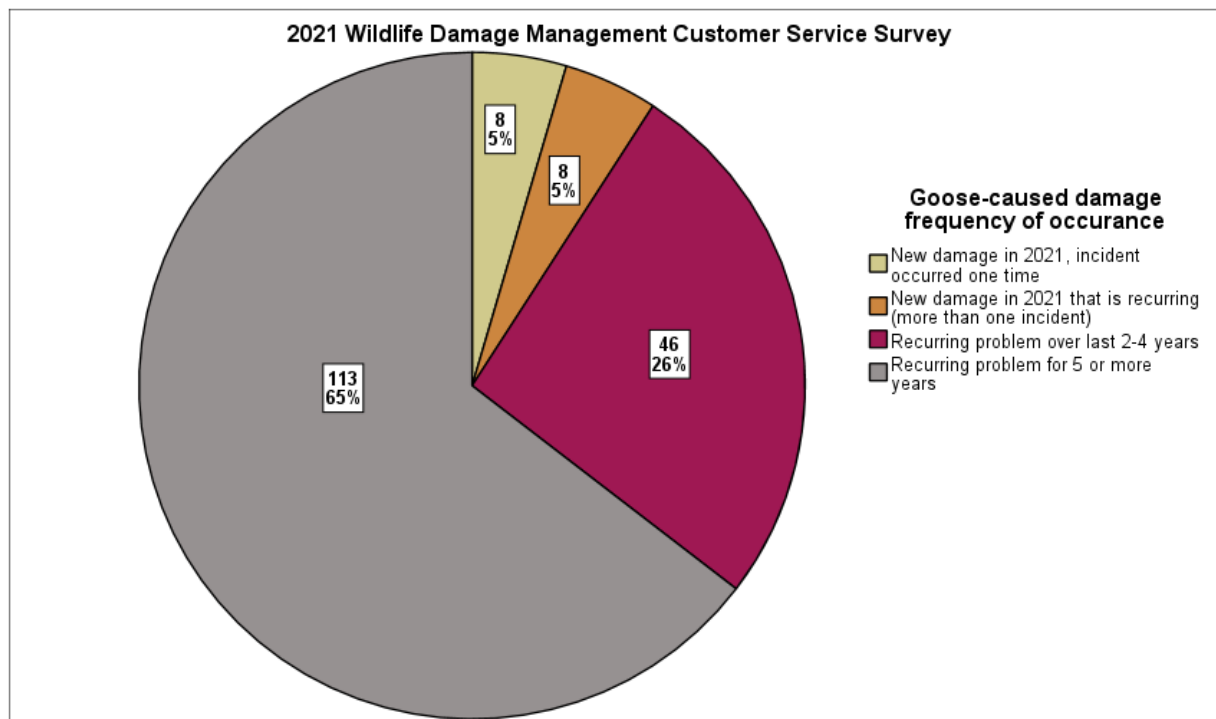


Figure 18. Count and percent of goose-caused damage frequency of occurrence.

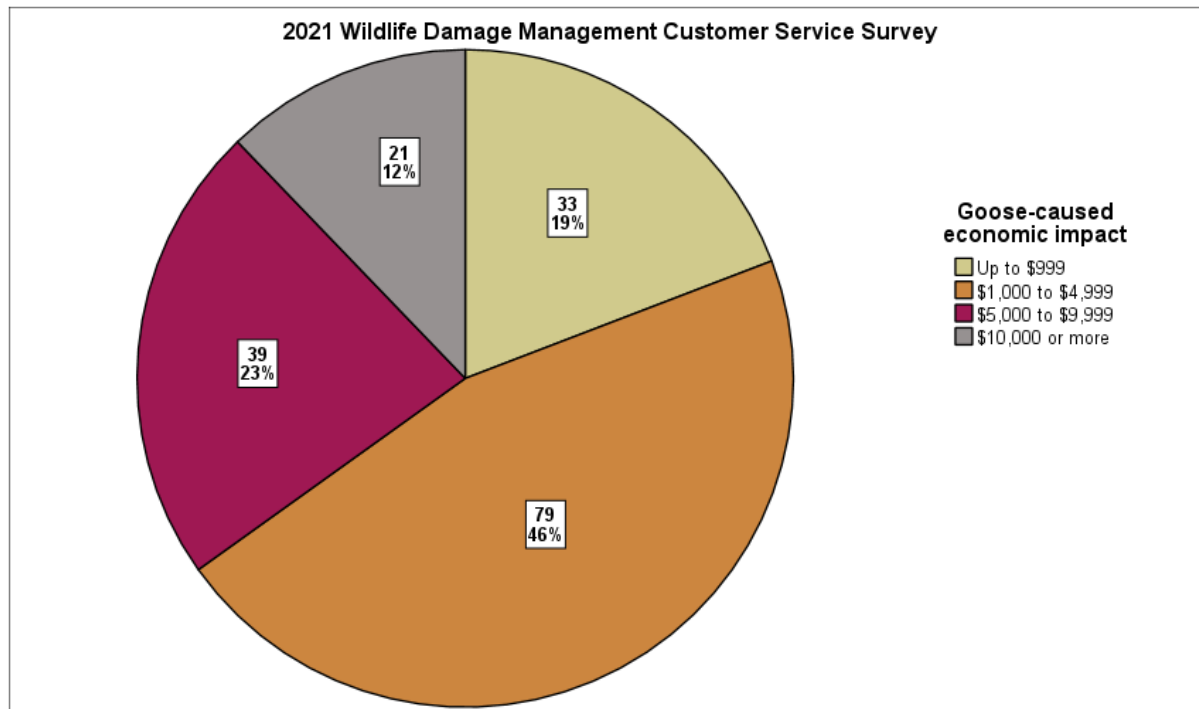


Figure 19. Count and percent of goose-caused economic impact valuation.

Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their goose-caused damage. Customers reported being very satisfied or somewhat satisfied with five of the goose-caused damage services provided (Table 7). Additionally, 59% (n=101) of customers rated the overall effectiveness of GFP's Wildlife Damage Management Program in addressing their goose-caused damage as moderately effective, followed by 27% (n=46) as very effective and 14% (n=25) as not effective at all.

Table 7. Descriptive statistics for satisfaction levels with goose-caused damage services received during 2021.

2021 Wildlife Damage Management Program Customer Service Survey			
Goose-Caused Damage Service	Mean*	Median	Mode
Technical information and/or advice (n=148)	4.03	4	5
Provided loaner equipment and/or supplies (e.g., live traps, snares) (n=80)	3.85	4	5
Direct assistance from a GFP Wildlife Damage Specialist (n=110)	4.17	5	5
Alteration of the habitat to discourage nuisance wildlife (n=80)	3.56	4	4
Exclusion of nuisance wildlife with fencing or other methods (n=105)	3.56	4	5
Deterring nuisance wildlife with noise, visual, or chemical methods (n=80)	3.61	4	3

*mean value is not an appropriate calculation for Likert-type 5-point scale questions. Due to fluctuating and sometimes very small sample sizes, mode is the appropriate central tendency descriptive statistic for this data.

Prairie Dog

Two customers who participated in this survey contacted GFP about prairie dog-caused damage during 2021 (Table 1). Both prairie dog-related service calls occurred in Region 1 and reported their prairie dog-caused damage as a recurring problem for more than five years. One customer valued their prairie dog-caused economic impact as \$5,000 - \$9,999 dollars and the other customer as \$10,000 dollars or greater.

Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their prairie dog-caused damage. Due to a very low sample size (n=2) levels of satisfaction widely vary across all prairie dog-caused damage services provided (Table 8). Additionally, one customer rated the overall effectiveness of GFP's Wildlife Damage Management Program in addressing their prairie dog-caused damage as very effective, the other customer did not respond.

Table 8. Descriptive statistics for satisfaction levels with prairie dog-caused damage services received during 2021.

2021 Wildlife Damage Management Program Customer Service Survey			
Prairie Dog-Caused Damage Service	Mean[*]	Median	Mode
Technical information and/or advice (n=1)	5.00	5	5
Provided loaner equipment and/or supplies (e.g., live traps, snares) (n=0)	-	-	-
Direct assistance from a GFP Wildlife Damage Specialist (n=2)	3.00	3	1 ^a
Alteration of the habitat to discourage nuisance wildlife (n=1)	5.00	5	5
Exclusion of nuisance wildlife with fencing or other methods (n=0)	-	-	-
Deterring nuisance wildlife with noise, visual, or chemical methods (n=1)	4.00	4	4

*mean value is not an appropriate calculation for Likert-type 5-point scale questions. Due to fluctuating and sometimes very small sample sizes, mode is the appropriate central tendency descriptive statistic for this data.

^a Due to very small sample size, multiple modes exist. The smallest value is shown.

Turkey

About 3% (n=8) of customers who participated in this survey contacted GFP about Turkey-caused damage during 2021 (Table 1). A little over half of turkey-related service calls occurred in Region 4 [57% (n=4)], followed by 28% (n=2) in Region 2 and 14% (n=1) in Region 3. About 43% (n=3) of customers reported their turkey-caused damage as new damage in 2021 that is recurring, followed by 29% (n=2) a recurring problem for more than five years, and responses of a recurring problem over last two to four years and new damage in 2021 that occurred one time were evenly split [14% (n=1)] (Figure 19). A little over half of responding customers valued their turkey-caused economic impact as \$999 or less [57% (n=4)] and 43% (n=3) as \$1,000 - \$4,999 dollars (Figure 20).

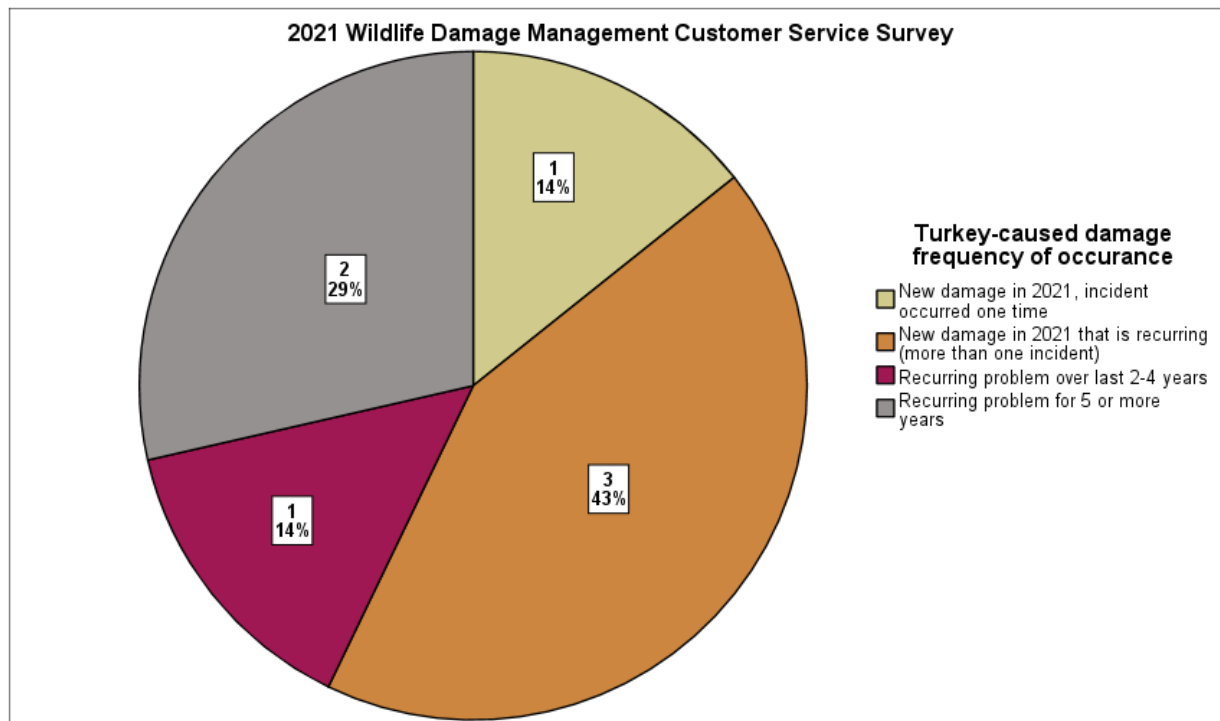


Figure 20. Count and percent of turkey-caused damage frequency of occurrence.

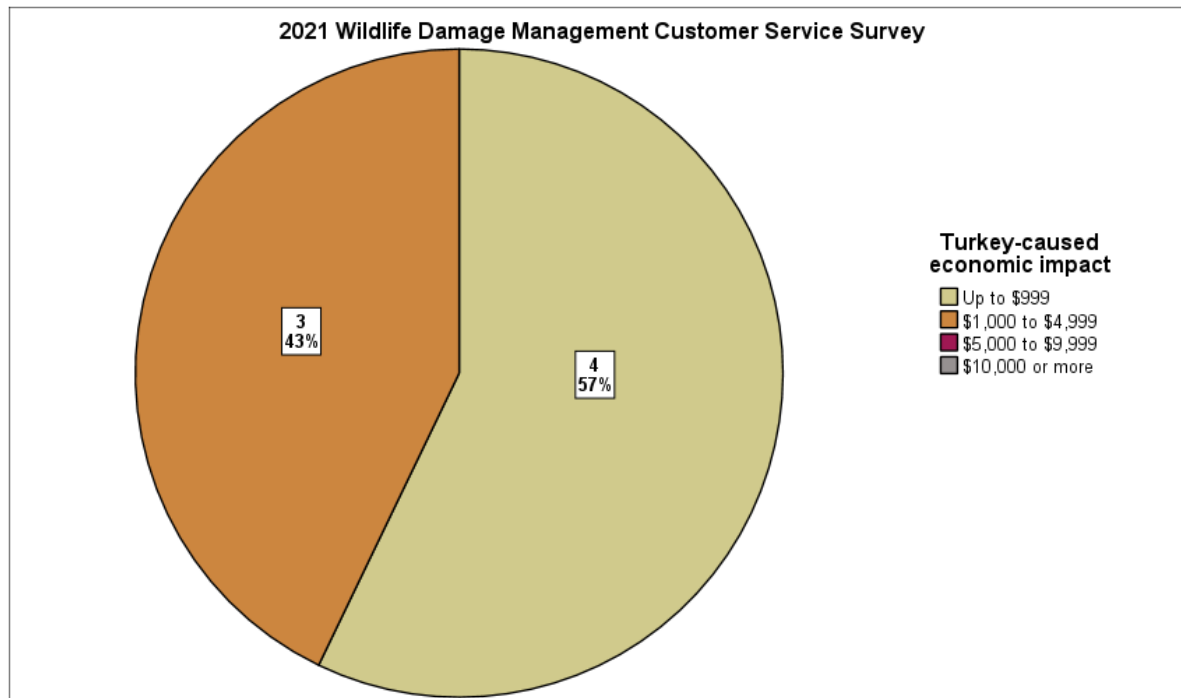


Figure 21. Count and percent of turkey-caused economic impact valuation.

Using 5-point Likert-type rating scale (1=very dissatisfied, 2=somewhat dissatisfied, 3=neither dissatisfied nor dissatisfied, 4=somewhat satisfied, 5=very satisfied), respondents were asked to assess their level of satisfaction with six types of WDM Program services received during 2021 related to their turkey-caused damage. Due to a very low sample size (n=6) customer levels of satisfaction widely vary across all turkey-caused damage services provided (Table 9). Additionally, 40% (n=2) of customers rated the overall effectiveness of GFP's Wildlife Damage Management Program in addressing their turkey-caused damage as very effective, while 60% (n=3) rated as not effective at all.

Table 9. Descriptive statistics for customer satisfaction levels with turkey-caused damage services received during 2021.

2021 Wildlife Damage Management Program Customer Service Survey			
Turkey-Caused Damage Service	Mean[*]	Median	Mode
Technical information and/or advice (n=6)	3.17	3	3 ^a
Provided loaner equipment and/or supplies (e.g., live traps, snares) (n=5)	3.00	3	1 ^a
Direct assistance from a GFP Wildlife Damage Specialist (n=6)	3.33	3.50	5
Alteration of the habitat to discourage nuisance wildlife (n=5)	2.40	2	2
Exclusion of nuisance wildlife with fencing or other methods (n=4)	2.75	2.50	1
Detering nuisance wildlife with noise, visual, or chemical methods (n=4)	2.50	2	1

^{*}mean value is not an appropriate calculation for Likert-type 5-point scale questions. Due to fluctuating and sometimes very small sample sizes, mode is the appropriate central tendency descriptive statistic for this data.

^aDue to very small sample size, multiple modes exist. The smallest value is shown.

Other Wildlife

About 4% (n=11) of customers who participated in this survey contacted GFP about other wildlife-caused damage during 2021 (Table 1). Due to very low sample sizes and uniqueness of each species, this data cannot be similarly analyzed as is in previous sections, and therefore, is briefly summarized below.

- Badger (n=2)
 - One customer reported their other wildlife-related service call occurred in Region 3, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$999 dollars or less. This respondent did not rate their level of satisfaction with types of services offered nor the overall effectiveness of addressing damage.
- Dickcissel (n=1)
 - Customer reported their other wildlife-related service call occurred in Region 3, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$1,000 to \$4,999 dollars. This respondent was neither dissatisfied nor satisfied with all types of services offered and rated the overall effectiveness of addressing damage was moderately effective.
- Gull (n=1)
 - Customer reported their other wildlife-related service call occurred in Region 3, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$5,000 to \$9,999 dollars. This respondent was very satisfied with technical information received and rated the overall effectiveness of addressing damage was very effective. The remaining types of services offered were not applicable.
- Hawk (n=1)
 - Customer reported their other wildlife-related service call occurred in Region 3, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$999 dollars or less. This respondent was very satisfied with technical information received, the WDS Specialist, and exclusion techniques applied. The remaining types of services offered were not applicable. The customer rated the overall effectiveness of addressing damage as moderately effective.
- Mink (n=3)
 - All customers reported their other wildlife-related service call occurred in Region 3 and valued their other wildlife-caused economic impact as \$999 dollars or less. One indicated this was new damage in 2021 that occurred one time, one reported new damage in 2021 that is recurring, and one responded that their damage was a recurring problem for 5 or more years. All were very satisfied with technical information received. Two reported being very satisfied (one not applicable) to the following services: loaner equipment, the WDS Specialist, altering habitat, and exclusion techniques applied. Deterrence type of service was not applicable. Two customers rated the overall effectiveness of addressing damage as moderately effective and one reported very effective.

- Mountain lion (n=1)
 - Customer reported their other wildlife-related service call occurred in Region 4, was new damage in 2021 that occurred once and valued their other wildlife-caused economic impact as \$10,000 dollars or more. This customer reported that none of the wildlife-caused damage services were applicable and rated the overall effectiveness of addressing damage as not effective at all.
- Red fox (n=1)
 - Customer reported their other wildlife-related service call occurred in Region 4, was a recurring problem over last two to four years and valued their other wildlife-caused economic impact as \$999 dollars or less. This respondent was very satisfied with technical information received and the WDS Specialist. The remaining types of services offered were not applicable. The customer rated the overall effectiveness of addressing damage as very effective.
- Wolf (n=1)
 - Customer reported their other wildlife-related service call occurred in Region 4, was new damage in 2021 that occurred once and valued their other wildlife-caused economic impact as \$999 dollars or less. This respondent was very satisfied with technical information received and neither dissatisfied nor satisfied with loaner equipment. The remaining types of services offered were not applicable. The customer rated the overall effectiveness of addressing damage as very effective.

Closing Question Comments

Survey participants were offered the opportunity to tell GFP if there was anything else that s/he believed the survey overlooked and that they would like to convey related to the Wildlife Damage Management Program in South Dakota (e.g., positive or negative changes observed, issues or opportunities). About 28% (n=98) customers provided additional text responses. *Text which appears inside brackets [...] has been added to clarify respondents' reference to specific survey questions, identify parts of comments that were illegible, or in some cases to indicate where personally identifying information or expletives were omitted.*

[...] did an excellent job for us. It was very much appreciated.
--

Appreciate all you do and your assistance in protecting our investment the experience for our guests/golfers.

Badgers are taking over and ruining land. Trapping is not catching them. Paid for airplane service for coyotes. My daughter who lives on farm by Ashton has big deer infestation in her yard. They are killing trees and a big nuisance and she has been told nothing can be done. That herd needs to be thinned out
--

Between [...] coming and shooting coyotes at night and the airplane hunting them they were able to get our coyote problem slowed down but it was always after the coyotes killed calves that we would get them to come. They did a good job getting them under control but I wish it would take place before the calves are lost.

WDS Specialist [...] and state trapper [...] did a good job
Conservation office was great! With the deer damage on expensive hay, we have been hit hard with the lack of forage available. I think there should be more funds available for the fencing cost share. More should be available for the labor to install the fence.
Coyotes are killing all my farm pets and geese are eating my crops
[...] has been amazing as I have mink killing chickens and ducks every year
Deer damage to my 20 year old shelter belt was not addressed but getting the deer out of my feed piles did keep them from coming into the yard. I used to have 200+ deer in my yards every night, now there are very few if any deer in my yard. In 2019 we had a ton of snow, which probably drove the deer into my yard and shelter belts to eat. They did do quite a bit of damage to the evergreens. Since we put the fence up around my feed piles, the deer haven't been a problem. Thank you.
Didn't get rid of beaver because it was too late in season he said so he'll have to come back in 2022.
Fencing deters geese some but short lived and the darn things return every year.
Getting kill permits is great, but finding time to do it is hard, they get smarter every year, I am not a great hunter at all, spend my time farming, I will try to find someone to hunt for me because I am not a good shot, I just drive them to a different part of the field where I can't see or get to as easy, did well over 10 acres of complete damage with other acres did come back a little, current soybean price of 15 @ 50 (my farm average was better than 50) is \$7500 in lost income plus the inputs of 8.91 per acre cost for a total of \$8,910 inputs puts the total loss of \$16,410. It adds up quickly, most don't want to hunt them if they have to burn and bury them. If they are hunters they want to get something in return, I am already out money, just an idea so I would be able to get more killed.
GFP service was very prompt, accommodating and courteous. The beaver didn't cooperate, but they gave it a good try.
GFP was helpful when damage got too bad
Goose damage has been an ongoing problem for a number of years. We started with a special spring kill permit which was not very effective. We felt a fence was the best solution for us, but it took several years to get it implemented. GFP did install electric fences in 2021 which definitely helped. Permanent fencing was installed in Nov. 2021 so 2022 will be our first year with it in place. The only small issue was a change in personnel that delayed us a small amount. I appreciated the prompt reimbursement for the fence expenses - thank you.
Goose kill permit has worked well. Would like to have it by 3rd week of March.
Goose numbers seem to be increasing
Goose population seems to be growing every year, the amount of damage can be extensive depending on the numbers. I think the GFP realizes this and gives landowners the opportunity to protect their investments. Thank you
Have a CHAP area for youth deer on property which has been very effective on thinning the numbers of does. [...] and the Sioux Falls crew have been very good to work with. Officer [...] and [...] have been very helpful also. Hats off to these guys
Help fund fencing project to resolve the issue. Also help in the use of guard dogs.

Here in McPherson County, we have established our own Predator District. We hire aerial services and that along with time from your state trapper have been the most effective. Your trapper cannot supply the control we need on his own. We are lucky to have [...] our pilot as he knows our area and is a skilled hunter.
I am very satisfied with how [...] has maintained the coyote population in my area and greatly reduced the number of lamb kills we have.
I can't say enough about State Trapper [...]. His skill and knowledge are unmatched. He is a hard worker, kind and communicates very well. I would not be exaggerator if I said he is probably your best employee in the state. His services help out more than I have words to express. [...]
I had tried to contact [...] and left a message to come see the Canadian thistles that took over where the damage was. He never replied. I have a mess.
I have no Problem with geese nesting in the area. I like to see them but when they bunch up and move to one or two sloughs and then feed on the soybeans that is where the problem is. Being able to shoot a few and getting them to move to a slough where it is grass or corn does help greatly. Thank you
I have told people that there need to get more deer tags in the turkey ridge area and we are told that the landowners don't know anything. We live here remember!
I need the plane to fly over my area while there is snow on the ground. It seems there are more coyotes around this than any other year and the plane does a good job controlling the population
I only received a permit to shoot the geese which was very effective
I own land 1/2 mile from Newton Hills State Park and have long ago accepted the fact that there certainly shall be some deer damage to crops/saplings. I do hope the turkeys stay fairly well confined to the Park because when they move 'out' they can become quite a nuisance. Also, did not expect to receive assistance because of the nature of the 'beast' that I was dealing with!! Growing up in north central SD, I had numerous occasions to do battle with the nomadic badger and thus I knew I may have been asking the impossible BUT with a bit of hesitation the help I received was extremely valuable!! We caught one of the culprits (no one was more surprised than me) and the rest of the family must have gone searching for more gophers in distant fields. I could not have been more pleased with the assistance I was given!!!!
I received no help other than a kill permit that doesn't allow for enough birds to be removed to be effective in controlling the problem and requires more time from me to implement than I have to give it. I can't spend two or three hours every day driving around (sometimes across the very crop I'm trying to protect) to shoot at these birds.
I spoke with two GFP professionals who were kind and eager to help. The trapper was so eager to help and shared knowledge and suggestions. I am beyond thrilled with all aspects of interaction. My coyote problem has been an issue on this multi-generationally owned property before I was born (I'm over 40). It seems though in the last few years they are completely comfortable coming up to the house.
I was given a goose kill permit, which I do appreciate
I will probably have to call you back this spring, I believe the beavers have come back but the guy did a good job and very friendly

If populations keep increasing with local birds, I feel GFP might need to address the early spring season possibility again to help control the numbers that are harassing area farmer's fields.
If you won't let us shoot more than 5 geese at a time in our beans with the permit at least have the equipment, available to fence it off and not tell me you are out of fencing material
It takes a lot of time to chase these geese off. I feel I am doing GFP job for them. All the time spent chasing reseeding extra spaying of weeds. Nothing against the geese just too many of them
Just need to start building fence and putting out cannons earlier.
Keep after them!
Keep the planes flying for us our trapper here does a good job fall river county
Keep up the great work you do. PR relations improved a lot in last 15 yrs.
More geese need to be harvested during regular season
[...] did a great job for us.
My gripe would be that most years we have GF&P put up a fence to try to hold the birds out of the beans. In the fall when GF&P's interns come out to remove the fence, they don't have enough common sense to drive their ATV's where the water receded but drive down the outside two rows of beans. Absolutely makes no sense and happens every year.
My issue was mostly on my end, I needed to call and have fence put up
Need a Spring Season on Canadian Geese and get the numbers down further.
Need to fly more in winter to kill coyotes before they have young.
Need to have more open goose hunting in our areas that are regulated by our local conservation officers and not a season that is set by someone not from our area. Needs to be flexible as the goose population dictates.
Need to redo Prairie Dog Management, file complaint in June 2021 and did not receive control till Feb. 2022. This is very unacceptable!!!
On rented land have been trying to get a fence put up, but landowner believes that he has to allow open hunting if he agrees to allowing fencing!!! I have had no contact with the specialist since he suggested the fencing and I agreed to work with landowner and get it done. Going on the second year now so very poor communication and no follow up.
One beaver has been eliminated. Still one other location that has had minor damage. I was told to handle the beaver situation by myself. No assistance from GFP personal. No assistance with continuing goose damage except for kill permit. I have spent well over a thousand dollars in hazing geese last year! It is your problem; you should be dealing with it! Not only is there direct damage from the plants they eat but when they thin an area there is more weed pressure. Those weeds seeds last in the soil for several years costing more in future weed control costs. Why should the landowner suffer financial losses from goose over population and be bullied in to letting any hunter come on their land and hunt? Hunters that disregard directions where not to drive, disregard instructions when to hunt, leave spent shells like garbage. Also, GFP WDM personal don't seem to understand that not every year are geese attracted to a field during hunting season. So how can hunting alone control the overpopulation of geese?
Our trapper is overwhelmed by all the country he has to cover, he does a very good job but could use more help!

Plane work well when we can get it in area. Plus, game warden [...] is awesome
Please continue the goose program! It is not about complete eradication but being able to a manageable level of loss!
Please help me!
Please keep sending me a kill permit.
Please shoot the coyotes. Thanks for a goose depredation permit.
Put up the electric fence way past where you think is necessary for geese. I personally saw on many fields, not just my own, where geese walked around the end of an electric fence and the problem with the geese eating crops was not even slowed.
Quicker fencing in the bad areas
Responded very quickly, thank you
Should have done more shooting damage, still had to chase them out a lot
Spring Canada goose season also open to out of state hunters. Deer more tags and longer season.
[...] is a squared-away individual.
Teach your guys how to properly put up an electric fence.
Thank you for the service! We appreciate it!
Thanks for your help
Thanks for your help. I am sure you will be helping again.
The deer population in my area is out of control and further action needs to be taken. Over the past 5 winters we have wintered over 60+ deer and have caused extensive damage to my feed supply. Bales have been brought out but it is a very temporary solution and not all will eat off of them. Contacted GFP office several times for geese damage but nothing was done and damage continued to happen. Disappointed in my geese issue, but deer issue has been somewhat managed with panels.
The fence for the geese did not work this year. I don't know if it was put in too late or electric fence wasn't working but they continued to damage as if it wasn't there.
The fence for the geese was installed too late and the fence was installed at heights too high, the geese could go under it.
The geese destroy my soybeans. Once I harvest one they usually leave so that's good. I also have deer destroying some trees by my sheds. Is there anything suggestions on keeping those away.
The local employees try very hard to help control the geese. The problem is that there are just too many of them and the population need to be lowered. The landowners are taking on quite a loss and a lot of work along with the GFP people to control damage that is partially caused by too many geese that are wanted to appease just a few hunters that want to hunt once or twice and have an easy hunt while it cost the farmers a lot of money in lost crops even with the control measures. While it is a problem everywhere the department should consider trying to get more help for the areas having the problems and if need be diverting more resources to that than expanding numbers for better hunting. The crop damage and feed damage should also be thought of in a higher regard when thinking of introducing or stocking other animals to hunt where they weren't before or at the very least their natural numbers are much lower and don't cause problems.

The management plan for whitetail deer along the Belle Fourche River in eastern Butte County has not effectively brought deer numbers into a reason carrying capacity for producers who must carry the burden. This has been a persistent issue since 2007. Feel good and band aid approaches have been applied at the economic loss to producers. EHD and Blue tongue have not decimated the herds, but instead has cost cattle and sheep producers greatly in animal health and loss as Whitetail serve as a host carrier for Blue Tongue. This complaint has been made know over periods of years and to each biological manager to no change in management practices. With numbers surveyed in 2016 by GFP it was found to contain more than 800 white tail per square mile in the wintertime. Put that to cattle numbers and that is more than 50 head of cattle you are running on your neighbor. Your stocking capacity is too high and not make for a considerate and reasonable neighbor.

The marksmanship and expertise in hunting the individual coyotes that damaged the three calves was far beyond any neighbor or local amateur. The job was done in one morning and without disturbing my cattle at all. Eliminating both members of the pair causing the damage quickly before more calves were injured was very efficient.

The need to put up electric fence much earlier there is a big body of water on this ground.

The Officer trapped all of the beavers and removed them from my pasture and creek, and the backed up water has all moved on down the creek. Thank you very much for the assistance.

The propane cannons really should be repaired so they all work. Also, it would be nice for more fencing funds. We really have a goose problem.

The response was the same day and was much appreciated.

The seagulls were very bad Game Warden told me to just start shooting them until they let me alone and after a few days they did.

The season for geese around Sioux falls should begin earlier so more geese can be harvested.

The temporary electric fence was not effective and hope we can explore new options for the 2022 crop year as my damage value will only increase.

They should compensate the farmers for their losses when it comes to losing their cattle

They used a plane to fly, but that success is based upon the day. They only came one time; it helps but it is not totally adequate.

This was my first year applying for a depredation goose tag. The process was very easy and very effective. We did not realize the damage that the geese were doing in the past until it was too late, but we were able to take care of them earlier in the year and save our crops thanks to this license. Very good program. Thank you

[...] did a very good job. I am lucky to have him available.

Too many deer in McPherson County. Need more Doe tags. They damage my hay supplies and ruin my trees.

Too many geese.

Very happy with the service and elimination of the coyote problem and beaver problem

Waste of time to call for help controlling coyotes and it takes over a month to even hear back from trapper, then almost two months to even kill one coyote. May as well save the money and fire them. Maybe promoting someone who can't even do his original job isn't a great idea

We did not find the permit useful because we were limited to 5 geese a day when we have sloughs all over the county and 10s and 20s of geese on each body of water. I also had interactions with officer [...], our interaction was very poor. He claimed that he had understanding and he knew what our struggle was, but in turn he showed no understanding and just used his position to belittle us and make himself look more important to his superiors.
We have an excellent relationship with the GFP and will work hard to maintain that experience
We have way too many deer in this area.
We live in elk country, something we just deal with. GFP does way more than any other state. Most of my neighbors like them. Stop listening to the four that hate them. GFP needs to start listening to the conservation minded landowners not the complainers that will always complain
We really like the kill permit to deter geese from crop land, this has worked very well to keep geese off fields when plants are small and susceptible to damage.
We would be supportive of legislation passes so sign up for aerial hunting can be done at the township annual meeting. We are supportive of landowner rights, just need to have a more efficient method for opting in and out.
When bringing hay out to feed deer, don't ask landowner to use his feed, we don't have enough the way it is. Also bring out good alfalfa for deer so they eat it.
Will I have to call next year to get you back or will you just come and put up fence?
Will you install a fence in 2022 without being called or do I have to call?
Would like permission for standing orders to deter the geese from our property or easier issuance of permits. They cause issues at all times.

References

- Carifio, J., & Perla, R. 2008. Resolving the 50-year debate around using and misusing Likert scales. *Medical Education*, 42:1150–1152.
- Cohen, J. 1988. *Statistical power analysis for the behavioral sciences* (2nd ed.). New York, NY: Psychology Press.
- Creswell, J. W., & Clark, V. L. P. 2018. *Designing and conducting mixed methods research* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Dillman, D.A., Smyth, J. D., and Christian, L. M. 2014. *Internet, phone, mail, and mixed mode surveys: The tailored design method* (4th ed.) Hoboken, NJ: John Wiley and Sons, Inc.
- Jamieson, S. (2004). Likert scales: How to (ab)use them. *Medical Education*, 38:1212–1218.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 22,140.

Appendix A: Survey Instrument (format adjusted)

South Dakota Game, Fish and Parks (GFP) Wildlife Damage Management Annual Customer Satisfaction Survey

ABOUT THIS SURVEY

GFP's Wildlife Damage Management (WDM) Program provides services that include actions to reduce livestock losses from predators, in addition to crop and property damage caused by other wildlife. The information you provide will allow GFP to adapt WDM Program services to best meet the needs of South Dakota's landowners and producers.

Please **take about 10 minutes** to tell us about the **wildlife damage services you received from GFP during 2021**.

Your participation in this research study is voluntary and anonymous. Your responses will never be presented in a way that they can be connected to your identity. The anonymous results of the survey will be published in summary form in reports. Anonymous survey data may be archived online in a publicly accessible format. There are no right or wrong answers and you can leave the survey at any time. **Questions? Contact Faren R. Wolter, *Human Dimensions Specialist*, Game Fish, and Parks, 605.773.4231 or faren.wolter@state.sd.us**

GFP would like to know about your experience contacting staff about your wildlife-associated damage?

Did you have any difficulty finding information about how to contact GFP regarding your wildlife-associated damage?

- ☐ Yes (1)
- ☐ No (2)
- ☐ I did not receive any wildlife-associated damage services from GFP during 2021 (3)

Skip To: End of Survey If GFP would like to know about your experience contacting staff about your wildlife-associated dama... = I did not receive any wildlife-associated damage services from GFP during 2021

How did you initially contact GFP about your wildlife-associate damage?

- ☐ I contacted a GFP Conservation Officer (1)
- ☐ I contacted a GFP wildlife biologist or other GFP field staff (2)
- ☐ I contacted GFP Wildlife Damage Specialist (3)
- ☐ I called GFP Customer Service (4)

GFP would like to know about your experiences with staff. Rate your interaction with the GFP employee you initially spoke with concerning your wildlife-associated damage.

	Poor (1)	Fair (2)	Good (3)	Excellent (4)
Person was knowledgeable (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Person was professional (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Person was responsive to my need or concern (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Person was courteous (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Person had a positive attitude (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

GFP would like to know about the type of wildlife damage and/or wildlife species control services you received. In 2021 did you contact GFP about wildlife-associated damage caused by any of these species? (select all that apply)

☐

Beaver (1)

☐

Coyote (2)

☐

Deer (3)

☐

Elk (4)

☐

Goose (5)

☐

Prairie dog (6)

☐

Turkey (7)

☐

I received services for different wildlife. (8)

What different wildlife species did you contact GFP about because it caused wildlife-associated damage in 2021? (text box will expand as you type or click on the bottom right corner and drag to expand its size)

Q8 GFP would like to know five things about your wildlife-associated damage during 2021.

- 1. where the wildlife damage occurred**
- 2. frequency of the wildlife damage**
- 3. estimated economic impact from the wildlife damage**
- 4. types of WDM Program services your received and your level of satisfaction or dissatisfaction with each**
- 5. overall effectiveness of GFP's Wildlife Damage Management Program in addressing the wildlife damage**

If you selected more than one animal, questions will repeat for each one you selected.

During 2021, in which GFP Region did your beaver caused damage occur? (select all that apply)

- ☐ Region 1 (1)
- ☐ Region 2 (2)
- ☐ Region 3 (3)
- ☐ Region 4 (4)

What is the frequency of occurrence of your beaver caused damage?

- ☐ New damage in 2021, incident occurred one time (1)
- ☐ New damage in 2021 that is recurring (more than one incident) (2)
- ☐ Recurring problem over last 2 - 4 years (3)
- ☐ Recurring problem for 5 or more years (4)

In **2021**, what is the estimated economic impact of **beaver** caused damage?

- ☐ Up to \$999 (1)
- ☐ \$1,000 to \$4,999 (2)
- ☐ \$5,000 to \$9,999 (3)
- ☐ \$10,000 or more (4)

Select the type(s) of service you received in 2021 for your beaver caused damage through GFP's Wildlife Damage Management Program and rate your level of dissatisfaction or satisfaction. (select all services that apply, if you did not receive a service then select N/A)

	Very dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	N/A (6)
Technical information and/or advice (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided loaner equipment and/or supplies (e.g., live traps, snares) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct assistance from a GFP Wildlife Damage Specialist (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alteration of the habitat to discourage nuisance wildlife (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusion of nuisance wildlife with fencing or other methods (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterring nuisance wildlife with noise, visual, or chemical methods (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the overall effectiveness of GFP's Wildlife Damage Management Program in addressing your beaver caused damage in 2021.

- ☐ Not effective at all (1)
- ☐ Moderately effective (2)
- ☐ Very effective (3)

During 2021, in which GFP Region did your coyote caused damage occur? (select all that apply)

- ☐ Region 1 (1)
- ☐ Region 2 (2)
- ☐ Region 3 (3)
- ☐ Region 4 (4)

What is/are the frequency of occurrence(s) of coyote caused damage?

- ☐ New damage in 2021, incident occurred one time (1)
- ☐ New damage in 2021 that is recurring (more than one incident) (2)
- ☐ Recurring problem over last 2 - 4 years (3)
- ☐ Recurring problem for 5 or more years (4)

What was the estimated economic impact of coyote caused damage in 2021?

- ☐ Up to \$999 (1)
- ☐ \$1,000 to \$4,999 (2)
- ☐ \$5,000 to \$9,999 (3)
- ☐ \$10,000 or more (4)

Select the type(s) of service you received in 2021 for your coyote caused damage through GFP's Wildlife Damage Management Program and rate your level of dissatisfaction or satisfaction. (select all services that apply, if you did not receive a service then select N/A)

	Very dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	N/A (6)
Technical information and/or advice (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided loaner equipment and/or supplies (e.g., live traps, snares) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct assistance from a GFP Wildlife Damage Specialist (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alteration of the habitat to discourage nuisance wildlife (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusion of nuisance wildlife with fencing or other methods (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterring nuisance wildlife with noise, visual, or chemical methods (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the overall effectiveness of GFP's Wildlife Damage Management Program in addressing your coyote caused damage.

- ☐ Not effective at all (1)
- ☐ Moderately effective (2)
- ☐ Very effective (3)

During 2021, in which GFP Region did your deer caused damage occur? *(select all that apply)*

- ☐ Region 1 (1)
- ☐ Region 2 (2)
- ☐ Region 3 (3)
- ☐ Region 4 (4)

What is/are the frequency of occurrence(s) of deer caused damage?

- ☐ New damage in 2021, incident occurred one time (1)
- ☐ New damage in 2021 that is recurring (more than one incident) (2)
- ☐ Recurring problem over last 2 - 4 years (3)
- ☐ Recurring problem for 5 or more years (4)

What was the estimated economic impact of deer caused damage in 2021?

- ☐ Up to \$999 (1)
- ☐ \$1,000 to \$4,999 (2)
- ☐ \$5,000 to \$9,999 (3)
- ☐ \$10,000 or more (4)

Select the type(s) of service you received in 2021 for your deer caused damage through GFP's Wildlife Damage Management Program and rate your level of dissatisfaction or satisfaction. (select all services that apply, if you did not receive a service then select N/A)

	Very dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	N/A (6)
Technical information and/or advice (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided loaner equipment and/or supplies (e.g., live traps, snares) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct assistance from a GFP Wildlife Damage Specialist (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alteration of the habitat to discourage nuisance wildlife (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusion of nuisance wildlife with fencing or other methods (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterring nuisance wildlife with noise, visual, or chemical methods (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the overall effectiveness of GFP's Wildlife Damage Management Program in addressing your deer caused damage.

- ☐ Not effective at all (1)
- ☐ Moderately effective (2)
- ☐ Very effective (3)

During 2021, in which GFP Region did your elk caused damage occur? *(select all that apply)*

- ☐ Region 1 (1)
- ☐ Region 2 (2)
- ☐ Region 3 (3)
- ☐ Region 4 (4)

What is/are the frequency of occurrence(s) of elk caused damage?

- ☐ New damage in 2021, incident occurred one time (1)
- ☐ New damage in 2021 that is recurring (more than one incident) (2)
- ☐ Recurring problem over last 2 - 4 years (3)
- ☐ Recurring problem for 5 or more years (4)

What was the estimated economic impact of elk caused damage in 2021?

- ☐ Up to \$999 (1)
- ☐ \$1,000 to \$4,999 (2)
- ☐ \$5,000 to \$9,999 (3)
- ☐ \$10,000 or more (4)

Select the type(s) of service you received in 2021 for your elk caused damage through GFP's Wildlife Damage Management Program and rate your level of dissatisfaction or satisfaction.
(select all services that apply, if you did not receive a service then select N/A)

	Very dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	N/A (6)
Technical information and/or advice (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided loaner equipment and/or supplies (e.g., live traps, snares) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct assistance from a GFP Wildlife Damage Specialist (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alteration of the habitat to discourage nuisance wildlife (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusion of nuisance wildlife with fencing or other methods (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterring nuisance wildlife with noise, visual, or chemical methods (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the overall effectiveness of GFP's Wildlife Damage Management Program in addressing your elk caused damage.

- ☐ Not effective at all (1)
- ☐ Moderately effective (2)
- ☐ Very effective (3)

During 2021, in which GFP Region did your goose caused damage occur? (select all that apply)

- ☐ Region 1 (1)
- ☐ Region 2 (2)
- ☐ Region 3 (3)
- ☐ Region 4 (4)

What is/are the frequency of occurrence(s) of goose caused damage?

- ☐ New damage in 2021, incident occurred one time (1)
- ☐ New damage in 2021 that is recurring (more than one incident) (2)
- ☐ Recurring problem over last 2 - 4 years (3)
- ☐ Recurring problem for 5 or more years (4)

What was the estimated economic impact of goose caused damage in 2021?

- ☐ Up to \$999 (1)
- ☐ \$1,000 to \$4,999 (2)
- ☐ \$5,000 to \$9,999 (3)
- ☐ \$10,000 or more (4)

Select the type(s) of service you received in 2021 for your goose caused damage through GFP's Wildlife Damage Management Program and rate your level of dissatisfaction or satisfaction. (select all services that apply, if you did not receive a service then select N/A)

	Very dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very Satisfied (5)	N/A (6)
Technical information and/or advice (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided loaner equipment and/or supplies (e.g., live traps, snares) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct assistance from a GFP Wildlife Damage Specialist (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alteration of the habitat to discourage nuisance wildlife (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusion of nuisance wildlife with fencing or other methods (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterring nuisance wildlife with noise, visual, or chemical methods (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the overall effectiveness of GFP's Wildlife Damage Management Program in addressing your goose caused damage.

- ☐ Not effective at all (1)
- ☐ Moderately effective (2)
- ☐ Very effective (3)

During 2021, in which GFP Region did your prairie dog caused damage occur? (select all that apply)

- ☐ Region 1 (1)
- ☐ Region 2 (2)
- ☐ Region 3 (3)
- ☐ Region 4 (4)

What is/are the frequency of occurrence(s) of prairie dog caused damage?

- ☐ New damage in 2021, incident occurred one time (1)
- ☐ New damage in 2021 that is recurring (more than one incident) (2)
- ☐ Recurring damage over last 2 - 4 years (3)
- ☐ Recurring damage for 5 or more years (4)

What was the estimated economic impact of prairie dog caused damage in 2021?

- ☐ Up to \$999 (1)
- ☐ \$1,000 to \$4,999 (2)
- ☐ \$5,000 to \$9,999 (3)
- ☐ \$10,000 or more (4)

Select the type(s) of service you received in 2021 for the prairie dog caused damage through GFP's Wildlife Damage Management Program and rate your level of dissatisfaction or satisfaction. (select all services that apply, if you did not receive a service then select N/A)

	Very dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	N/A (6)
Technical information and/or advice (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided loaner equipment and/or supplies (e.g., live traps, snares) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct assistance from a GFP Wildlife Damage Specialist (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alteration of the habitat to discourage nuisance wildlife (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusion of nuisance wildlife with fencing or other methods (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterring nuisance wildlife with noise, visual, or chemical methods (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the overall effectiveness of GFP's Wildlife Damage Management Program in addressing your prairie dog caused damage.

- ☐ Not effective at all (1)
- ☐ Moderately effective (2)
- ☐ Very effective (3)

During 2021, in which GFP Region did your turkey caused damage occur? (select all that apply)

- ☐ Region 1 (1)
- ☐ Region 2 (2)
- ☐ Region 3 (3)
- ☐ Region 4 (4)

What is/are the frequency of occurrence(s) of turkey caused damage?

- ☐ New damage in 2021, incident occurred one time (1)
- ☐ New damage in 2021 that is recurring (more than one incident) (2)
- ☐ Recurring problem over last 2 - 4 years (3)
- ☐ Recurring problem for 5 or more years (4)

What was the estimated economic impact of turkey caused damage in 2021?

- ☐ Up to \$999 (1)
- ☐ \$1,000 to \$4,999 (2)
- ☐ \$5,000 to \$9,999 (3)
- ☐ \$10,000 or more (4)

Select the type(s) of service you received in 2021 for your turkey caused damage through GFP's Wildlife Damage Management Program and rate your level of dissatisfaction or satisfaction. (select all services that apply, if you did not receive a service then select N/A)

	Very dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	N/A (6)
Technical information and/or advice (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided loaner equipment and/or supplies (e.g., live traps, snares) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct assistance from a GFP Wildlife Damage Specialist (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alteration of the habitat to discourage nuisance wildlife (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusion of nuisance wildlife with fencing or other methods (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterring nuisance wildlife with noise, visual, or chemical methods (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the overall effectiveness of GFP's Wildlife Damage Management Program in addressing your turkey caused damage.

- ☐ Not effective at all (1)
- ☐ Moderately effective (2)
- ☐ Very effective (3)

During 2021, in which GFP Region did your other wildlife caused damage occur? *(select all that apply)*

- ☐ Region 1 (1)
- ☐ Region 2 (2)
- ☐ Region 3 (3)
- ☐ Region 4 (4)

What is/are the frequency of occurrence(s) of other wildlife caused damage?

- ☐ New damage in 2021, incident occurred one time (1)
- ☐ New damage in 2021 that is recurring (more than one incident) (2)
- ☐ Recurring problem over last 2 - 4 years (3)
- ☐ Recurring problem for 5 or more years (4)

What was the estimated economic impact of other wildlife caused damage in 2021?

- ☐ Up to \$999 (1)
- ☐ \$1,000 to \$4,999 (2)
- ☐ \$5,000 to \$9,999 (3)
- ☐ \$10,000 or more (4)

Select the type(s) of service you received in 2021 for your other wildlife caused damage through GFP's Wildlife Damage Management Program and rate your level of dissatisfaction or satisfaction. (select all services that apply, if you did not receive a service then select N/A)

	Very dissatisfied (1)	Somewhat dissatisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat satisfied (4)	Very satisfied (5)	N/A (6)
Technical information and/or advice (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided loaner equipment and/or supplies (e.g., live traps, snares) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct assistance from a GFP Wildlife Damage Specialist (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alteration of the habitat to discourage nuisance wildlife (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusion of nuisance wildlife with fencing or other methods (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deterring nuisance wildlife with noise, visual, or chemical methods (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the overall effectiveness of GFP's Wildlife Damage Management Program in addressing your other wildlife caused damage.

- ☐ Not effective at all (1)
- ☐ Moderately effective (2)
- ☐ Very effective (3)

Final questions - be sure to click the bottom right arrow to submit your answers.

How would you describe your primary land ownership or land uses for the land on which you received wildlife damage services in 2021?

- ☐ Homeowner only (1)
- ☐ Exclusively farming (2)
- ☐ Mostly farming and some ranching (3)
- ☐ Equal farming and ranching (4)
- ☐ Mostly ranching and some farming (5)
- ☐ Exclusively ranching (6)
- ☐ Other (7)

Briefly describe the other ownership or land uses.(text box will expand as you type or click on the bottom right corner and drag to expand its size)

Lastly, if there is anything that you believe we may have overlooked and that you would like to convey to GFP related to the wildlife damage services you received in 2021 or the Wildlife Damage Management Program, describe here: (text box will expand as you type or click on the bottom right corner and drag to expand its size)
